

COLLEGE OF ARCHITECTURE, ART, AND PLANNING

ADMINISTRATION

William G. McMinn, dean

Ellen McCollister, director of external affairs

Cynthia K. Nordby, director of administrative operations

Donna L. Kuhar, registrar

Elizabeth A. Cutter, admissions coordinator

Margaret Webster, slide curator

Kim Alexander, career office coordinator

FACULTY ADVISERS

Architecture students are assigned faculty advisers for their first year. Upperclass students have no regular assigned advisers and are free to seek assistance and advice from the most appropriate faculty member or college officer.

Freshmen in the fine arts department are assigned faculty advisers for the first year. Students may then choose advisers in their major area of concentration.

Undergraduate students in the Program of Urban and Regional Studies are assigned faculty advisers and may elect to change advisers at any time.

All students in the college are invited to share their concerns and seek advice from the volunteer student advisers at anytime.

Specific inquiries regarding rules, procedures, or deadlines should be addressed to:

Val K. Warke, chair, Department of Architecture

David B. Lewis, chair, Department of City and Regional Planning

Victor Kord, chair, Department of Art.

DEGREE PROGRAMS

	<i>Degree</i>
Architecture	B.Arch.
	B.F.A.
Fine Arts	B.F.A.
History of Architecture and Urban Development	B.S.
Urban and Regional Studies	B.S.

The college offers programs leading to the bachelor's degree—the five-year program in architecture leads to the Bachelor of Architecture; four-year programs in art and architecture lead to the Bachelor of Fine Arts. In addition, four-year programs with a concentration in either urban and regional studies or history of architecture lead to the Bachelor of Science.

Graduate-level programs are offered in art, architectural design and urban and regional design, architectural sciences, history of architecture and urban development, historic preservation planning, city and regional planning, regional science, and landscape architecture.

Students in each of these programs work in physical proximity to one another and thus gain a broader understanding of their own special area of interest through contact with the students and faculty in other disciplines.

Early in its development the college set a limit on the number of students it would enroll and devised a selective method of admission. There are now more than 650 students and a full-time teaching staff of over fifty-five, supplemented by visiting professors and critics, part-time lecturers, and assistants. Teachers and students mix freely, and much instruction and criticism is on an individual basis.

The college's courses are integral parts of the professional curricula. Fundamental subjects are taught by faculty members whose experience provides them with professional points of view. The concentration of professional courses within the college is balanced by the breadth of view gained from courses and informal learning in the rest of the university. The college believes that this breadth is an essential element of professional education. This conviction is evident in the form of the curriculum, the methods of teaching, and the extracurricular life of teachers and students.

FACILITIES

The college occupies Sibley Hall, Olive Tjaden Hall, Rand Hall, and the Foundry. In Sibley are the facilities for architecture, and city and regional planning, as well as certain administrative offices and the Fine Arts Library. The Department of Art is housed in Olive Tjaden Hall. Sculpture and shop facilities are in the Foundry. The Green Dragon, a student lounge, is located in the basement of Sibley Dome. The college has three darkrooms that are available for general use and serve as laboratories for the photography courses. A darkroom fee must be paid by each user. Information about darkroom rules and regulations, hours, and equipment is available in the slide library.

Through the generosity of the late Lillian P. Heller, the college also owns the home of William H. Miller, the first student to enroll for the study of architecture at Cornell and later a practicing architect in Ithaca. This building is used to house visiting teachers and guests of the college and for occasional receptions and social events.

Libraries

The Fine Arts Library, in Sibley Dome, serves the College of Architecture, Art, and Planning through its collections on architecture, fine arts, city and regional planning and landscape architecture. The library, with more than 133,000 books, is capable of supporting undergraduate, graduate, and research programs. Some 1,900 serials are currently received and maintained.

A slide library in Sibley Dome contains the F. M. Wells Memorial Slide Collection, which consists of a large and growing collection of slides of architecture, architectural history, and art. The library now includes approximately 300,000 slides.

The facilities of the libraries of other schools and departments on campus and the John M. Olin Library, designed primarily as a research library for graduate students, are also available.

Museums and Galleries

The Herbert F. Johnson Museum of Art was formally opened in May 1973. Although many of its exhibitions and activities relate directly to academic programs of the university, the museum has no administrative affiliation with any department. In this way, its programs freely cross academic boundaries, stimulating interchange among disciplines. With a strong and varied collection and a continuous series of high-quality exhibitions, it fulfills its mission as a center for the visual arts at Cornell. Art galleries are also maintained in Willard Straight Hall, where loan exhibitions of paintings and graphic work by contemporary artists are held. Current work of students in the College of Architecture, Art, and Planning is shown in the exhibition areas in Sibley Dome and the gallery in Olive Tjaden Hall.

Rome Program

The College of Architecture, Art, and Planning's Rome Program was founded in the fall of 1986 to provide instruction in Italy for students seeking excellence in art, architecture, and other disciplines. The program offers an educational experience that draws upon the rich past of Rome, its resources in museums, its art and architecture, and its wide variety of cultural offerings. The school is located in the famous Palazzo Massimo in the center of the historical city next to such well-known Roman sights as Piazza Navona, the Pantheon, and Rome's famous outdoor market at the Campo dei Fiori.

The program in Rome offers components for students majoring in liberal arts, architecture, fine arts, and planning. Full course loads are available to all students in a curriculum that stresses the convergence of artistic, cultural, and architectural ideas vital to an understanding of the city. Students are responsible for planning course schedules that ensure their particular requirements can be met, since course offerings in Rome are limited.

COLLEGE ACADEMIC POLICIES

Ownership of Student Work

All drawings, models, paintings, graphic art, and sculpture done in the studios and drafting rooms as a part of the instructional program are the property of the college until they have been graded and released by the instructor. Certain works may be selected by the college for retention for academic purposes.

Exhibitions of Student Work

Exhibitions of student work will be held each semester as part of the yearly schedule of the Olive Tjaden Hall gallery and the John Hartell Gallery. These may display the work of a specific course or exhibit examples of the best recent work done.

Scholastic Standards

Term by term, a candidate for an undergraduate degree in this college is required to pass all courses in which the student is registered and have a weighted average for the term of not less than C (2.0). The record of each student who falls below the standard will be reviewed by the Student Records Committee for appropriate action, as described below:

1) **Warning** means that the student's performance is not up to expectations. Unless improvement is shown in the subsequent term, the student may be placed on final warning or may be suspended.

2) **Final Warning** indicates that the student's record is unsatisfactory. Unless considerable improvement is shown in the subsequent term, the student is subject to dismissal from the college.

3) **Suspended: Academic Deficiency** The student is dismissed from the college and may not continue studies in the college. A student who has been suspended may apply for readmission after an absence of at least two semesters. Application for readmission is made by letter, addressed to the department chair. The student must submit evidence that his or her time has been well spent since suspension, and, if employed, must submit a letter from an immediate superior. If a student chooses to register for courses, either extramurally at Cornell or at another institution, he or she should be advised that credit for these courses will not apply toward the degree but will appear on the student's transcript. The grades received for any courses taken while on suspension will not be counted into the grade point average. Readmission to the college after suspension is at the discretion of the Admissions Committee. Application for spring-term readmission must be made by November 15, and application for fall-term readmission must be made by April 15. Refer to the college handbook for further information regarding suspension.

4) **Dismissed: May Not Reregister, College of Architecture, Art, and Planning** The student is dismissed from the college and is permanently prohibited from continuing studies in it. This dismissal does not preclude the possibility of applying for admission to another division of the university.

The above actions are not necessarily sequential. A student who has received a warning may be suspended for academic

deficiency at the end of the next term if performance during that time is deemed to be grossly deficient.

It is necessary to have a cumulative average of at least C- (1.7) for graduation.

ARCHITECTURE

Val K. Warke, chair; M. Cohen, M. Dennis, W. Goehner, D. P. Greenberg, R. Hall, G. Hascup, L. F. Hodgden, M. Jarzombek, G. Jullian de la Fuente, A. Kira, D. Krall, M. Kubelik, B. G. MacDougall, A. B. Mackenzie, J. C. Miller, L. Mirin, V. Mulcahy, J. Ochshorn, J. Ostlund, C. F. Otto, A. Ovaska, C. W. Pearman, A. Pendleton, H. W. Richardson, C. Rowe, D. Salmon, M. L. Schack, J. P. Shaw, A. Simitch, J. Wells, M. Woods, J. Zissovici

Professional Degree Program

The first professional degree in architecture is the Bachelor of Architecture. This degree counts toward the professional registration requirements established by the various states and the National Council of Architectural Registration Boards. The professional program is normally five years in length and is designed particularly for people who, before they apply, have established their interest and motivation to enter the field. It therefore incorporates both a general and professional educational base.

The program is oriented toward developing the student's ability to deal creatively with architectural problems on analytical, conceptual, and developmental levels. The sequence courses in design, consisting of studio work augmented by lectures and seminars dealing with theory and method, are the core of the program. Sequences of studies in human behavior, environmental science, structures, and building technology provide a base for the work in design.

In the first three years the student has the opportunity to establish a foundation in the humanities and sciences through electives. During the fourth and fifth years this base may expand through detailed further studies in these areas. Within the professional program a basis for understanding architecture in its contemporary and historical cultural contexts is established.

The structure of the program incorporates considerable flexibility for the individual student to pursue his or her particular interest in the fourth and fifth years. By carefully planning options and electives in the fifth year, it is possible for a qualified student to apply the last year's work for the Bachelor of Architecture degree to one of the graduate programs offered in the department. Some students are then able to complete the requirements for the master's degree in one additional year.

Washington Program

Fourth- and fifth-year students in good standing who have completed the requirements of the first three years of the curriculum are eligible for a term of study in Washington, D.C. Outstanding third-year students are admitted to the Washington program only by petition and a review of their design record. Courses offered by the department include design, thesis, special problems in architec-

tural design, a professional seminar, and professional studies. Additional courses are offered by other departments participating in the program. The program provides a period of intensive exposure to the characteristics of urban development within the framework of a design studio. Content concentrates on urban design issues, restraints relative to financing, zoning, development criteria, adaptive reuse, and multiuse developments.

Rome Program

The program offers the opportunity for students from Cornell and other universities to spend one or two terms of study in Rome. This option is open to fourth- and fifth-year Cornell architecture students; outstanding third-year students are admitted by petition and a review of their design record. Courses offered by this department include design, thesis, thesis introduction, history, theory, architectural science, and design communication. In addition, courses are offered by other departments in Italian language, Italian culture, and history of art. The program provides a unique urban and architectural experience drawing from the rich past of the city for sources of instruction and inspiration.

Overlap Program

For qualified students the department offers an option that combines the fifth year of the undergraduate program with the first year of the Master of Architecture program. In the fall of the fourth undergraduate year interested students petition the department to substitute Arch 601-602 for Arch 501-502. At the same time, they complete graduate school applications and submit them with fee and portfolio to the graduate field secretary for architecture. Students accepted into the program may not normally begin until the fall of their fifth year and, once enrolled, may not transfer back into the 501-502 sequence.

Following admission into the Overlap Program, students may petition to apply toward the requirements of the master's degree a maximum of 30 credits, including Arch 601-602 and other advanced courses taken in excess of distribution requirements for the Bachelor of Architecture degree.

Curriculum

First Year

<i>Fall Term</i>	<i>Credits</i>
101 Design I	6
181 History I	3
151 Drawing I	2
Math III Calculus	4
Out-of-college elective	3
	18

Spring Term

102 Design II	6
182 History of Architecture	3
152 Drawing II	2
122 Structural Concepts	4
Out-of-college elective (Freshman Seminar suggested)	3
	18

Second Year

<i>Fall Term</i>	<i>Credits</i>
201 Design III	6
221 Structural Systems I	3
231 Architectural Elements and Principles	2
261 Site Planning	3
Out-of-college elective	3
	<hr/> 17

Spring Term

202 Design IV	6
222 Structural Systems II	3
232 Design Methods and Programming	2
262 Building Technology, Materials, and Methods	3
College elective	3
	<hr/> 17

Third Year*Fall Term*

301 Design V	6
361 Environmental Controls I—Lighting and Acoustics	3
Departmental elective	3
Out-of-college elective	3
Out-of-college elective	3
	<hr/> 18

Spring Term

302 Design VI	6
362 Environmental Controls II—Mechanical and Passive Solar Systems	3
Departmental elective	3
Out-of-college elective	3
College or out-of-college elective	3
	<hr/> 18

Fourth Year*Fall Term*

401 Design VII	6
461 Professional Practice	3
Departmental elective	3
College elective	3
Out-of-college elective	3
	<hr/> 18

Spring Term

402 Design VIII	6
Departmental elective	3
Departmental elective	3
College or out-of-college elective	3
Out-of-college elective	3
	<hr/> 18

Fifth Year*Fall Term*

501 Design IX or 601 or 603 Overlap Program	6
Departmental elective	3
College or out-of-college elective	3
Out-of-college elective	3
Out-of-college elective	3
	<hr/> 18

Spring Term

502 Design X or 602 or 604 Overlap Program	8
Departmental elective	3
College or out-of-college elective	3
College or out-of-college elective	3
	<hr/> 17

Required Departmental Courses

<i>Terms</i>	<i>Subject</i>	<i>Course Number</i>	<i>Credits</i>
10	design	101–504	62
1	mathematics	Math 111 or approved elective	4
3	structures	122, 221, 222	10
4	technology	261, 262, 361, 362	12
2	architectural principles, theories, and methods	231, 232	4
2	history of architecture	181, 182	6
1	professional practice	461	3
2	drawing	151, 152	4
			<hr/> 105

Electives*Departmental Terms*

	<i>Credits</i>
3 history of architecture: 300-level	9
1 design communication: design communication, drawing, computer graphics	3
2 principles, theories, and methods	6
1 architectural science	3
	<hr/> 21

College Terms

2 art: any courses	6
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Out-of-College Terms

	<i>Credits</i>
1 computer programming	3
1 Freshman Seminar (humanities)	3
1 social science	3
1 mathematics, physics, or biological sciences	3
1 humanities	3
	<hr/> 15

Free

Of the electives, 15 credits are to be taken outside the College of Architecture, Art, and Planning, and 15 credits may be taken either in or outside the college. 30

Total credits 177

Transfer Students

Although the program leading to the Bachelor of Architecture is specifically directed to those who are strongly motivated to begin professional study when entering college, it is sufficiently flexible to allow transfers for students who have not made this decision until after they have been in another program for one or two years. Individuals who have already completed a nonprofessional undergraduate degree must also apply to transfer to the Bachelor of Architecture degree program, since the graduate program in architecture requires the Bachelor of Architecture degree or its equivalent for entrance.

Transfer students are responsible for completing that portion of the curriculum that has not been covered by equivalent work. Applicants who have had no previous work in architectural design must complete the ten-term design sequence. Since this sequence may be accelerated by attending summer terms, seven or eight regular terms and two or three summer terms are typically required.

For those who would benefit from an opportunity to explore the field of architecture before deciding on a commitment to professional education, the department offers an introductory summer program that includes an introductory studio in architectural design, lectures, and other experiences designed to acquaint the participants with opportunities, issues, and methods in the field of architecture.

Admission is offered to a limited number of transfer applicants who have completed a portion of their architecture studies in other schools. Each applicant's case is considered individually. Transfer students must complete a minimum of 70 credits and four terms in residence, taking 35 of the 70 credits (including four terms of design) in the Department of Architecture. Placement in the design sequence is based on a review of a representative portfolio of previous work.

Alternative Programs**Bachelor of Fine Arts**

After completing the first four years of requirements, the student may choose to receive the degree of Bachelor of Fine Arts (B.F.A.) in architecture. It is not a professional degree.

Bachelor of Science in History of Architecture

The history of architecture major leads to a Bachelor of Science degree, conferred by the College of Architecture, Art, and Planning. The major is intended for transfer students from other programs at Cornell and from colleges and universities outside Cornell. Students in the College of Arts and Sciences may take the major as part of a dual-degree program. The course of study in this major, available to students from a variety of academic backgrounds, offers the opportunity for a vigorous exploration of architecture and its history.

Admission requirements. Two years of undergraduate study; Arch 181 and 182, or the equivalent; and one 6-credit studio in architecture (or Arch 103, which is available during the fall semester for students with no previous studio work) are required. Students transferring from a B.Arch. program must be in good standing in their design sequence.

Procedure. Students from Cornell who want to transfer to the program may do so at the beginning of the fall term of their third or fourth year of study. They submit a short application as prospective internal transfer students. It is crucial that, before applying, all prospective internal transfer students meet with a history of architecture faculty member to discuss procedural matters and program content.

Students who want to transfer to the program from outside Cornell must apply to the Department of Architecture by March 15. Applications can be considered after this date but are given lower priority. Applications for both internal and external transfer students are available from Elizabeth Cutter, Admissions Office, College of Architecture, Art, and Planning, Cornell University, 135 East Sibley Hall, Ithaca, New York 14853-6701.

Curriculum. A student entering the program selects an adviser from the history of architecture faculty in the Department of Architecture. Adviser and student together prepare an appropriate two-year course of study according to the following guidelines:

- 1) 29 credits of 300-level courses in architectural history: Arch 381, 382, 384, 385, 387, 388, 390, 391, and 393
- 2) 12 credits in 600-level architectural history seminars: Arch 681 through Arch 690; or 8 credits in a 600-level seminar plus Arch 499, offered for honors candidates only
- 3) 24 credits in electives selected in consultation with the student's adviser
- 4) Language requirement, to be met in the manner specified for students enrolled in the College of Arts and Sciences

Honors program. Students will graduate with honors if, during their two years of study in the program, they have a cumulative average of B or better in all courses, have no grade lower than A- in all history of architecture courses taken at the 300 level, and have completed an honors thesis (Arch 499) deemed to be of distinguished quality by the history of architecture faculty.

Dual Degree Options

Students can earn both the B.S. and B.Arch. degrees either simultaneously or sequentially. Students who have transferred into the B.Arch. program at Cornell may find this to be a special opportunity for an enlarged and enriched program of study. Ordinarily this option requires five years of study and assumes the satisfactory fulfillment of requirements in both the B.S. and B.Arch. programs.

Students currently enrolled in the College of Arts and Sciences at Cornell can earn a B.A. in an arts college major and a B.S. in the history of architecture in five years. In this option, students complete a minimum of 150 credits, which includes the B.S. prerequisites and curriculum requirements and 100 credits of the

usual distribution and major requirements in the College of Arts and Sciences. Further information about this option is available at the Admissions Office, 135 East Sibley Hall, and at the Academic Advising Center of the College of Arts and Sciences, 55 Goldwin Smith Hall.

Students may also elect to continue toward a Master of Arts degree in the history of architecture. The M.A. ordinarily requires a minimum of two years of graduate work beyond the bachelor's degree; with this special sequential degree arrangement that time is shortened by approximately one year.

Summer Term in Architecture

The summer term offers students the opportunity of a concentrated period of design work. Design is offered at both undergraduate and graduate levels; the term is six to eight weeks in duration.

Undergraduate design sequence courses, including thesis, are offered at first- through fifth-year levels in Ithaca. Normally there is also a design program abroad for third-, fourth-, and fifth-year students.

Students from schools of architecture other than Cornell are welcome to apply to the college for admission to any summer programs.

At the graduate level the summer term is devoted to problems forming part of the student's program of work. The term may carry residence credit equal to that of a normal academic term. Participation in the program cannot be undertaken without the consent of the student's Special Committee.

Architectural Design

Numbers in parentheses are old course numbers.

Courses in brackets are not offered this year.

A studio fee of \$25 is charged each semester for every design course (these fees are subject to change).

Elective Design Courses

103-104 (111-112) Elective Design Studio

103, fall; 104, spring. 6 credits each term. Limited to students from outside the department. Prerequisite: permission of instructor. M W F 2-6. Staff.

303 (310) Special Problems in Architectural Design

Fall or spring. Variable credit (maximum, 3). Prerequisite: permission of instructor. Hours to be arranged. Staff. Independent study.

200, 300, 400, 500 Elective Design

Fall or spring. 6 credits each term. Open by permission to transfer students who have not been assigned to a sequence course. Prerequisite: permission of department office. Each student is assigned to a class of appropriate level.

M W F 2-6. Staff.

Sequence Courses

101 Design I

Fall. 6 credits. Limited to department students.

Studios and lects, M W F 2-6. Staff. An introduction to design as a conceptual discipline directed at the analysis, interpretation, synthesis, and transformation of the physical environment. Exercises are aimed at developing an understanding of the issues, elements, and processes of environmental design.

102 Design II

Spring. 6 credits. Limited to department students. A continuation of Architecture 101.

Studios and lects, M W F 2-6. Staff. Human, social, technical, and aesthetic factors related to space and form. Design problems range from those of the immediate environment of the individual to that of small social groups.

201-202 Design III and IV

Fall and spring. 6 credits each term. Coregistration in Architecture 231-232 and completion of Architecture 151-152 required. Limited to department students.

Studios and sems, M W F 2-6. Staff.

301-302 Design V and VI

Fall and spring. 6 credits each term. Limited to department students.

Studios and sems, M W F 2-6. Staff.

401-402 Design VII and VIII

Fall and spring. 6 credits each term. Limited to department students.

Studios and sems, M W F 2-6. Staff. Programs in architectural design, urban design, or architectural technology and environmental science, etc.

501 Design IX

Fall or spring. 6 credits. Limited to department students.

Studios and sems, M W F 2-6. Staff. Programs in architectural design, building typology investigations, and research leading to complete development of the student's thesis program. General instruction in the definition, programming, and development of a thesis is followed by tutorial work with the student's advisory committee.

502 Design X—Thesis

Fall or spring. 8 credits. Prerequisite: Architecture 501. Required of B.Arch. candidates who must satisfactorily complete a thesis. Students accepted for admission to the Overlap Program are exempt from the thesis requirement.

Studios, M W F 2-6. Staff.

510 Thesis Introduction

Foreign summer programs and Washington program only. 3 credits. Must be taken in conjunction with Architecture 500. Architecture 500 will be considered equivalent to Architecture 501 when taken concurrently with Architecture 510 during a foreign summer program or in Washington.

Lects and sems. Staff. Lectures, seminars, and independent research leading to complete development of the student's thesis program. General instruction in the definition, programming, and development of a thesis.

601-602 Special Program in Architectural Design

Fall and spring. 9 credits each term. Limited to students who have been accepted into the Overlap Program. Registration by petition only.

603-604 Special Program in Urban Design

Fall and spring. 9 credits each term. Limited to students who have been accepted into the Overlap Program. Registration by petition only.

Departmental Electives**342 (162) Introduction to Social Sciences in Design**

Spring. 3 credits. Not offered every year. Lec, M W F 9:05. B. MacDougall. An introduction to concepts and methods in the social sciences for architects; how approaches from anthropology, environmental psychology, and sociology can be used in the study and design of the built environment. *Note:* This course meets distribution requirements for architectural principles, theories, and methods.

641-642 (611-612) Urban Housing Developments

641, fall; 642, spring. 2 credits each term. Limited to fourth- and fifth-year students in architecture and graduate students. Prerequisite: permission of instructor. Not offered every year. Staff.

[643 (613) Transportation

Fall. 2 credits. Prerequisite: permission of instructor. Not offered every year. Not offered 1989-90.

Sem, hours to be arranged. Staff. The impact of various transportation forms on the environment is considered from the perspectives of architects, engineers, planners, and human ecologists. Readings and discussions of past, current, and future transportation modes focus on aesthetic and physical aspects.]

644 (614) Low-Cost Housing

Fall. 3 credits. Prerequisite: permission of instructor. Not offered every year. T 2-4:30. H. W. Richardson. Aspects of low-cost housing involving engineering technology, architecture, physical planning, economics, and sociology.

648-649 (618-619) Seminar in Urban and Regional Design

648, fall; 649, spring. 3 credits each term. Limited to fifth-year and graduate students. Not offered every year. Hours to be arranged. Staff and guest lecturers. A broad range of issues and problems of urban and regional development and the context in which the designer functions are surveyed. Selected case studies are presented by the participants and visitors.

Graduate Courses**701-702 (711-712) Problems in Architectural Design**

Fall and spring. 9 credits each term. Studio and sem, hours to be arranged. Staff. Basic first-year design course for graduate students whose major concentration is architectural design.

703-704 (713-714) Problems in Urban Design

Fall and spring. 9 credits each term. Studio and sem, hours to be arranged. C. Rowe and staff. Basic first-year design course for graduate students whose major concentration is urban design.

801 (811) Thesis or Research in Architectural Design

Fall or spring. 9 credits. Hours to be arranged. Staff. Second-year design course for graduate students whose major concentration is architectural design.

802 (812) Thesis or Research in Urban Design

Fall or spring. 9 credits. Hours to be arranged. C. Rowe and staff. Second-year design course for graduate students whose major concentration is regional design.

Structures**122 (222) Structural Concepts**

Spring. 4 credits. Prerequisite: Mathematics III or approved equivalent. Lec and sems, M W F 9-10:30. Salmon. Fundamental concepts of structural behavior. Statics and strength of materials.

221(321) Structural Systems I

Fall. 3 credits. Prerequisites: Mathematics III and Architecture 122. Lec and sems, M W F 11:15-12:05. Salmon. Structural design concepts and procedures for steel building construction.

222 (322) Structural Systems II

Spring. 3 credits. Prerequisite: Architecture 122. M W F 11:15-12:05. Salmon. Structural design concepts and procedures for reinforced concrete building construction.

326 Building Substructure

Spring. 3 credits. Prerequisites: Architecture 222 or concurrent registration and permission of instructor. Not offered every year. Sem, hours to be arranged. Staff. The principles of soil mechanics and subsurface exploration. Design of building foundations—footings, piles, and subgrade walls.

Architectural Principles, Theories, and Methods**131 An Introduction to Architecture**

Fall or spring. 3 credits. Open to out-of-department students only. T R 11:15-1:10. Staff, guest lecturers. Architecture for non-architects. Intended to familiarize non-architecture students with the profession of architecture through lectures, readings, and films. Examines past and present criteria for excellence in architecture and the notable designs and designers who achieve this. Related fields such as urban design, landscape architecture, structural design, interior design, computer graphics, and professional practice will be included.

231 Architectural Elements and Principles

Fall. 2 credits. Architecture students must register concurrently in Architecture 201. Studios and lec, T 1:30-3:25. Staff. Theory of the order, perception, and function of architectural space. Discourse on the nature of architectural systems and the multiplicity of ways they can be used to solve architectural problems.

232 Design Methods and Programming

Spring. 2 credits. Architecture students must register for this course concurrently with Architecture 202. Studios and lec, T 1:30-3:25. Staff. Basic methods for developing architectural programs. Programming as a conceptual as well as a descriptive task is emphasized. Basic methods of design. Analytic and synthetic skills are stressed.

331 Special Problems in Principles, Theories, and Methods

Fall or spring. Variable credit (maximum, 3). Prerequisite: permission of instructor. Hours to be arranged. Staff. Independent study.

335 Theory of Architecture

Fall or spring. 3 credits. Prerequisite: Architecture 231-232 or permission of instructor. Not offered every year. Lec, T R 4:40-6:30. L. F. Hodgden.

336 Theory of Architecture

Fall or spring. 3 credits. Limited to third-year students and above. Not offered every year. Lec, T R 4:40-6:30. L. F. Hodgden. Theories of modern architecture: De Stijl, cubist and purist painting, industrialized architecture, Le Corbusier's architecture and urban theories, architectural sequence, facades, the free plan, "DOM-INO" theory.

337 Special Investigations in the Theory of Architecture I

Fall or spring. Variable credit (maximum, 3). Prerequisite: permission of instructor. Hours to be arranged. Staff. Independent study.

338 Special Topics in the Theory of Architecture I

Fall or spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. Hours to be arranged. V. Warke and visiting faculty. Topic to be announced before preregistration.

431 Theory of Architecture

Fall. 3 credits. Prerequisite: third-year status. Not offered every year. Lec, T R 4:40-6:30. L. F. Hodgden. Gardening and architecture: urban parks; villas and country houses; and Italian, French, and English landscape gardens. Site planning.

432 Theory of Architecture

Spring. 3 credits. Prerequisite: third-year status. Not offered every year. Lec, T R 4:40-6:30. L. F. Hodgden. The development of urban form, urban intervention, contextualism, ideal cities, historic new towns, streets, piazzas, fortifications, public buildings and social housing types, site planning, and transportation.

435 Architecture and Representation

Fall. 3 credits. Limited to degree candidates in architecture. Prerequisite: successful completion of Architecture 231–232. Not offered every year.

Lecs, disc, and reviews, T R 2:30–4:30. V. Warke.

A study of architecture as it functions as a representational art, referring to its past while inferring its present.

635 Critical Theory in Architecture

Spring. 3 credits. Prerequisite: permission of instructor. Not offered every year.

Sem, hours to be arranged. V. Warke.

An inquiry into the fundamental principles of architectural criticism in theory and practice, with emphasis on the structures of criticism in the twentieth century.

637 Special Investigations in the Theory of Architecture II

Fall or spring. Variable credit (maximum, 4).

Prerequisite: permission of instructor.

Hours to be arranged. Staff.

Independent study.

638 Special Topics in the Theory of Architecture II

Fall or spring. 3 credits. Prerequisite: permission of instructor. Not offered every year.

Hours to be arranged. V. Warke and visiting faculty.

Topic to be announced before preregistration.

[639 Principles of Design Process

Fall or spring. 3 credits. Limited to third-year architecture students and above; students in other colleges must have permission of instructor. Not offered every year. Not offered 1989–90.

Sems, M W 10:10–12:05. A. Mackenzie.

Analysis of the major theories and techniques of design developed during the past fifteen years, with special emphasis on application to the solution of whole problems in architectural design.]

Note: 667–668 **Architecture in Its Cultural Context I and II** is accepted as a theory course. See the section “Architectural Science and Technology Courses” for description.

Design Communication

Darkroom fees for all photography courses (these fees are subject to change):

In-college students—\$55 per term

Out-of-college students—\$55 plus \$10 per term course fee

151(191) Drawing I

Fall. 2 credits.

Studios, T R 2:30–4:25. Staff.

Freehand drawing with emphasis on line and perspective representation of form and space.

152(192) Drawing II

Spring. 2 credits. Prerequisite: Architecture 151.

Studios, T R 2:30–4:25. Staff.

Freehand drawing as a means of conceiving and expressing spatial form; line weight, shades and shadows, and figure drawing.

251 Introductory Photo I (also Art 161)

Fall or spring. 3 credits each term.

Hours to be arranged. Staff.

For description see Art 161.

351 Introductory Photo II (also Art 261)

Spring. 3 credits. Prerequisites: Architecture 251 or Art 161, or permission of instructor.

Hours to be arranged. Staff.

For description see Art 261.

353 Large-Format Architectural Photography

Spring. 3 credits. Prerequisites: Architecture 251 or Art 161 or 261, or permission of instructor. Darkroom fee, \$55/\$65. Not offered every year.

Lec and studio, hours to be arranged.

Staff.

The special uses of large-format view camera photography. Emphasis on the creative use of the view camera in architectural photography.

355 Graphic Design Studio

Fall or spring. 3 credits. Prerequisite:

Architecture 151 or 152, or permission of instructor. Not offered every year.

Lec and studio, hours to be arranged.

Staff.

Design and preparation of materials for reproduction in print media. Studio in typography, available printing processes, and photomechanical methods of reproduction.

356 Architectural Simulation Techniques

Fall or spring. 3 credits. Prerequisite:

Architecture 151 or permission of instructor.

Lec and studio, hours to be arranged. G.

Hascup.

Two- and three-dimensional simulation techniques in architecture. Emphasis on simulation of environment, space, materials, and lighting as visual tools for architectural design.

457 Special Project in Photography

Fall or spring. Variable credit (maximum, 3).

Prerequisites: written proposal outlining the special project and permission of instructor. Not offered every year.

Hours to be arranged. Staff.

Independent study.

458 Special Project in Design Communication

Fall or spring. Variable credit (maximum, 4).

Limited to undergraduates. Prerequisites: written proposal outlining the special project and permission of instructor.

Hours to be arranged. Staff.

Independent study.

Architectural Science and Technology**[160 The History of Architectural Technology**

Fall or spring. 3 credits. Not for students in the Department of Architecture. Not offered every year.

Staff.

Architectural technology is a seemingly illogical blend of scientific knowledge and empirical experience. Whereas it may seem chaotic to the nonprofessional, it is a product of logic in the widely differing areas of design, structure, installation, production and erection, material use, law, economics, and historical development. The evolution of this interdependence is treated using examples of architectural and civic engineering works and processes.]

261 Environmental Controls—Site Planning

Fall. 3 credits.

Lecs, T R 11:15–1:10. J. Ochshorn.

The basic principles involved in design in the outdoor environment. A brief historical perspective. A development of inventory including grading and drainage. Foundations, surfacing, and construction.

262 Building Technology, Materials, and Methods

Spring. 3 credits.

Lecs, T R 11:15–1:10. J. Ochshorn.

Properties of materials—their use and application to the design of buildings and building systems. Discussion of various methods of building construction and assembly.

361 Environmental Controls—Lighting and Acoustics

Fall. 3 credits.

Lecs, M W 9:05–11:00. R. Hall and staff.

Basic properties and principles of sound and light. Sound phenomena, noise control, absorption, acoustical design. Light, color, and form. Natural lighting possibilities and constraints. Good and bad examples of artificial lighting.

362 Environmental Controls—Mechanical and Passive Solar Systems

Spring. 3 credits.

Lecs, M W F 9:05–11:00. Staff.

Basic thermal analysis of buildings, human comfort criteria, energy conservation, passive solar design, HVAC distribution systems, overview of mechanical conveying systems and plumbing.

367 Contemporary Italian Culture

Fall or spring. Variable credit (maximum, 3).

For students in the Rome program only.

Staff and visiting faculty.

This course provides a broad view of the culture and social structure of Italy, drawing from Italian literature, history, and current events.

371 Environmental Technology Workshop I

Fall or spring. 2 credits. Not offered every year.

Studio, hours to be arranged. Staff.

The mechanical engineer's task and its relation to the architectural design process. Full-scale and model studies of the role of air movement and temperature in building design. Passive and active solar energy design.

372 Environmental Technology Workshop II

Fall or spring. 2 credits. Prerequisite or corequisite: Architecture 362. Not offered every year.

Studio, hours to be arranged. Staff.

The tasks of the acoustical consultant, the electrical engineer, and the illumination consultant in relation to the architect's work. Acoustical and lighting design studies using full-scale mock-ups and specific building type studies. Cost factors.

374 (334) Computer Graphics (also Computer Science 417)

Spring. 3 credits. Prerequisites: two terms of calculus and Computer Science 211, or equivalent. Not offered every year.

2 lecs, 1 lab. D. P. Greenberg.

Introduction to the principles of interactive computer graphics, including input techniques, display devices, display files, interactive graphic techniques, two- and three-dimensional computer graphics, perspective transformations, hidden line and hidden surface algorithms, and color-picture generation.

375 Practicum in Computer Graphics (also Computer Science 418)

Spring. 2 credits. Prerequisite: Computer Science 211. Recommended: Computer Science 314. Corequisite: Architecture 374. Not offered every year.

1 lab.

Two or three programming assignments dealing with sophisticated interactive vector graphics programs on calligraphic displays and solid-image generation on raster graphics displays.

378 (338) Computers in Architecture Seminar

Fall or spring. 2 credits. Prerequisites: Computer Science 100 or equivalent. Not offered every year.

Hours to be arranged. Staff.

Exploration of the use of computers in a variety of ways encompassing architectural practice and education. Use of the computer is not required for this course.

379 (339) Architectural Computer Applications

Fall or spring. 3 credits. Prerequisites: Computer Science 100 or second-year standing. Not offered every year.

Hours to be arranged. Staff.

Introduction to the use of the computer as a tool in the architectural design process. Experience with computer applications will be offered.

461(481) Professional Practice

Fall or spring. 3 credits each term.

T 9:05–11:00. M. Schack and staff.

An examination of organizational and management theories and practices for delivering professional design services. Included is a historic overview of the profession and a review of the architect's responsibilities from the precontract phase through construction. Application of computer technology in preparing specifications.

462 Professional Seminar

Fall or spring. 3 credits. Washington Program only.

M. Schack and staff.

Visits to public and private agencies and architectural firms in Washington and Baltimore. Discussions relative to the various aspects of each firm's practice and the identification of agency roles.

477-478 (437-438) Special Projects in Computer Graphics

477, fall; 478, spring. Variable credit (maximum, 4). Limited to third-year students and above. Prerequisites: Architecture 374 plus concurrent registration in Computer Science 314 or equivalent, and permission of instructor.

Hours to be arranged. D. P. Greenberg. Advanced work in computer graphics input and display techniques, including storage tube, dynamic vector and color raster displays.

561 Special Problems in Architectural Science

Fall or spring. Variable credit (maximum, 3). Prerequisite: permission of science staff instructor.

Hours to be arranged. Staff.

Topics to be announced. Independent study.

563 Emerging Methods in Energy-Efficient Design

Fall. 3 credits. Prerequisite: Architecture 362. Not offered every year.

Sem, T R 9:05. Staff.

State-of-the-art energy-efficient building design strategies and computational methods to model the thermal performance of buildings, presented through case studies of exemplary designs and application of selected analytical methods to exercises in building design development.

[564 Earth-sheltered Architecture

Fall or spring. 3 credits. Not offered 1989–90. Hours to be arranged. Staff.]

571-572 (531-532) Computer-aided Structural Design

571, fall; 572, spring. 4 credits each term. Limited to fourth-year students and above. Prerequisites: Architecture 374 and Civil and Environmental Engineering 371–372, concurrent registration in Civil and Environmental Engineering 673, and permission of instructor. Not offered every year.

D. P. Greenberg.

Advanced topics involving interactive computer graphics and advanced structural analysis techniques.

[573-574 (533-534) Computer-aided Environmental Design

573, fall; 574, spring. 4 credits each term. Limited to students in their fourth or later year. Prerequisites: Architecture 374 and 362, one year of college physics, and permission of instructor. Not offered every year.

Staff.

Advanced topics involving interactive computer graphics and advanced environmental design techniques. Topics may include acoustics, lighting, and energy analyses.]

[662 Environmental Control Systems

Fall or spring. 3 credits. Prerequisite: Architecture 362. Not offered every year. Lec and sem, hours to be arranged. Staff.

The influences of the environment on the design of buildings and urban developments. Lecture and workshop exercises use the wind tunnel and artificial sun.]

667-668 Architecture in Its Cultural Context I and II

667, fall; 668, spring. 4 credits each term. Prerequisite: permission of instructor. Not offered every year.

Sem, M W F 11:15. B. MacDougall.

Fall term, theory; spring term, problem solving and method. An examination of the relationship between architecture and other aspects of culture. Emphasis on the motivations for particular architectural forms and especially on theories of architecture. Examples from the United States and Asia.

Graduate Courses**761-762 Architectural Science Laboratory**

761, fall; 762, spring. 6 credits each term. Open to architectural science graduate students only.

Hours to be arranged. Staff.

Projects, exercises, and research in the architectural sciences.

763-764 Thesis or Research in Architectural Science

763, fall; 764, spring. Variable credit (maximum, 12). Limited to architectural science graduate students.

Hours to be arranged.

Independent study.

Architectural History

The history of the built domain is an integral part of all aspects of the architecture curriculum, from design and theory to science and technology. Incoming students take Architecture 181–182 in the first year, and three additional courses from the 380–390 series, preferably in the third and fourth years. Seminars are intended for advanced undergraduate and graduate students and do not satisfy undergraduate history requirements. Courses, seminars, and special investigations focus on the Western tradition, which constitutes the most immediate setting for contemporary practice. Building cultures from other parts of the world, often more extensive and far older than those of the West, are studied in special offerings as opportunities in faculty resources become available.

Sequence Courses**181 History of Architecture I**

Fall. 3 credits. Required of all first-year students in architecture; open to all students in other colleges with an interest in the history of the built domain.

T R 11:15–1:10. Staff.

The history of the built environment as social and cultural expression in Western civilization from earliest times to the present. In the fall, themes, theories, and ideas in architecture and urban design are considered on the basis of selected instances from the civilization of Mesopotamia to the seventeenth century.

182 History of Architecture II

Spring. 3 credits. Required of all first-year students in architecture. Open to all students in other colleges with an interest in the history of the built domain; may be taken independently of Architecture 181.

T R 11:15–1:10. Staff.

The history of the built environment as social and cultural expression in Western civilization from earliest times to the present. In the spring, themes, theories, and ideas are addressed in greater detail for architecture and urban design from the eighteenth century to the 1980s.

Freshman Writing Seminars**190 The Language of Architecture**

Fall or spring. 3 credits. Not for students in the Department of Architecture.

Staff.

The metaphor of language is used to discuss works of architecture both as formal objects and as carriers of meaning when seen in their cultural contexts. Contemporary and historical examples, including local buildings, are examined to develop skills in visual analysis and in "reading the messages" in architectural design.

191 The Literature of Architecture

Fall or spring. 3 credits. Not for students in the Department of Architecture.

Staff.

The literature of architecture, understood as the testimony of the architects themselves, is drawn on to examine major themes of twentieth-century architecture. Texts are presented according to rhetorical mode within a framework of thematic categories. For example, narrative, descriptive, and polemical readings address the birth of the skyscraper. Three salient themes in modern architecture are explored in the seminar: the impact of technology and revolution, the skyscraper and dwelling as new types for new needs, and the aesthetic of modern architecture.

Directed Electives**[381 Architecture of the Classical World**

Spring. 3 credits. Limited to 30 students. Prerequisites: Architecture 181–182 or permission of instructor. Not offered every year. Not offered 1989–90.

Hours to be announced. M. Jarzombek.

The history of architecture and urban design in ancient Mediterranean civilizations, with emphasis on Greece and Rome. The course considers change and transformation of building types and their elements within the general context of social demands.]

382 Architecture of the Middle Ages

Fall. 4 credits. (Credit for this course may be obtained by taking History of Art 332.) Prerequisites: Architecture 181–182 or permission of instructor. Not offered every year.

M W F 12:20. R. G. Calkins.

A survey of medieval architecture from the Early Christian period to the late Gothic (A.D. 300–1500). Emphasis is given to the development of structural systems, form, function, and meaning of important medieval buildings.

384 The Renaissance

Fall. 3 credits. Limited to 30 students. Prerequisites: Architecture 181–182 or permission of instructor.

T R 9:05–11. M. Jarzombek.

History of European architecture and city planning of the fifteenth and sixteenth centuries. Special consideration is given to building types and to internal changes in architecture and urban design, as well as to external influences such as social, economic, and political factors.

385 The Baroque

3 credits. Limited to 30 students. Prerequisites: Architecture 181–182 or permission of instructor. Not offered every year.

M W 11:15–1:10. C. F. Otto.

History, ideas, and theories of architecture and urban design in Europe between 1600 and 1800. Special consideration is given to the contribution and significance of major architects of the time.

386 English Architecture: 1688–1892

Fall. 3 credits. Not offered every year.

Hours to be arranged. C. Rowe and staff.

An investigation of English architecture from the revolution of 1688 to the appearance of the parliamentary Labour party in 1892.

387 The Nineteenth Century

Spring. 3 credits. Limited to 30 students. Prerequisites: Architecture 181–182 or permission of instructor.

T R 11:15–1:10. M. Woods.

Examination of the leading trends in Western architectural theory and practice from the rationalist traditions through art nouveau.

388 The Twentieth Century

Fall. 3 credits. Limited to 30 students. Prerequisites: Architecture 181–182 or permission of instructor. Not offered every year.

M W 11:15–1:10. C. F. Otto.

The history, ideas, and theories of architecture and urban design in Europe and America during the course of the twentieth century, beginning with reform efforts of the 1890s and concluding with work from the 1980s.

390 American Architecture I

Fall. 3 credits. Limited to 30 students. Prerequisites: Architecture 181–182 or permission of instructor.

M W 9:05–11. M. Woods.

History of American architecture and urbanism from the late seventeenth century to the Civil War, with emphasis on stylistic trends, practitioners, and social and aesthetic ideals of the time.

391 American Architecture II

Spring. 3 credits. Limited to 30 students. Prerequisites: Architecture 181–182 or permission of instructor.

M W 9:05–11. M. Woods.

A continuation of Architecture 390 but may be taken independently. The history of American architecture and urbanism from the Civil War to 1960. Special attention is paid to the dominant cultural, technical, and aesthetic determinants of form as manifested in the work of the major architects of the time.

393 The American Planning Tradition (also City and Regional Planning 462)

Spring. 4 credits. Prerequisites: Architecture 181–182 or permission of instructor.

Hours to be announced.

S. Christopherson.

A systematic review of American city planning history, beginning with the earliest colonial settlements and ending with the era of the New Deal. An introductory lecture course requiring no previous exposure to planning or architecture, and a prerequisite for students intending to take advanced seminars or independent studies in planning history.

396 Special Topics in Architectural History

Spring. 3 credits. Limited to 30 students.

Prerequisites: Architecture 181–182 or permission of instructor. Not offered every year.

T R 9:05–11. M. Jarzombek.

Topic to be announced by preregistration.

397 Special Topics in Architectural History

Spring. 3 credits. Limited to 30 students.

Prerequisites: Architecture 181–182 or permission of instructor. Not offered every year.

M W 11:15–1:10. M. Kubelik.

Topic to be announced by preregistration.

[398 Special Topics in Architectural History

Spring. 3 credits. Limited to 30 students.

Prerequisites: Architecture 181–182 or permission of instructor. Not offered every year.

M W 11:15–1:10. M. Woods and staff.

Topic to be announced by preregistration.]

399 Special Topics in Architectural History

Fall or spring. 3 credits. Limited to 30 students. Prerequisites: Architecture 181–182 or permission of instructor.

Hours to be announced. Staff.

Topic to be announced by preregistration.

Courses in Preservation**583 (543) Measured Drawing (also City and Regional Planning 567)**

Fall. 3 credits. For undergraduate architecture students and graduate students in history and preservation. Prerequisite: permission of instructor.

Hours to be announced. M. A. Tomlan.

Combines study of architectural drawings as historical documents with exercises in preparing measured drawings of small buildings. Presents the basic techniques of studying, sketching, and measuring a building and the preparation of a finished drawing for publication.

584 (544) Problems in Contemporary Preservation Practice (also City and Regional Planning 563)

Spring. Variable credit (maximum, 3).

Hours to be announced. M. A. Tomlan.

A review and critique of ongoing preservation projects and an investigation of areas of expertise currently being developed, presented by staff and guest lecturers.

585 (545) Perspectives on Preservation (also City and Regional Planning 562)

Fall. 3 credits.

Hours to be announced. M. A. Tomlan and visiting lecturers.

Introductory course for preservation planning. The rationale for, and methods of, using existing cultural and aesthetic resources in the planning and design of regions and cities.

586 (546) Documentation for Preservation Planning (also City and Regional Planning 560)]

Fall. 3 credits.

Hours to be announced. M. A. Tomlan and visiting lecturers.

Methods of collecting, recording, processing, and analyzing historical architectural and planning materials.

587 (547) Building Materials Conservation (also City and Regional Planning 564)

Spring. 3 credits. Open to juniors, seniors, and graduate students.

Hours to be announced. M. A. Tomlan.

A survey of the development of building materials in the United States, chiefly during the nineteenth and early twentieth centuries, and a review of the measures that might be taken to conserve them.

588 (548) Historic Preservation Planning Workshop: Surveys and Analyses (also City and Regional Planning 561)

Fall or spring. 4 credits.

Hours to be announced. Staff.

Techniques for the preparation of surveys of historic structures and districts; identification of American architectural styles, focusing on upstate New York; explorations of local historical resources, funding sources, and organizational structures. Lectures and training sessions. Emphasis on fieldwork with individuals and community organizations.

Seminars in Architectural History

681 Seminar in the Architecture of the Classical World

Fall or spring. 4 credits. Prerequisites: Architecture 381 or permission of instructor. Not offered every year.

Hours to be announced. Staff.

Issues in Greek and Roman architectural history. Specific topic to be announced.

684 Seminar in the Renaissance

Fall or spring. 4 credits. Prerequisites: Architecture 384 or permission of instructor. Not offered every year.

Hours to be announced. M. Kubelik.

Issues in European architecture and city planning of the fifteenth and sixteenth centuries. Specific topic to be announced.

685 Seminar in the Baroque

Fall or spring. 4 credits. Prerequisites: Architecture 385 or permission of instructor. Not offered every year.

Hours to be announced. C. Otto.

Special topics in the history of European architecture and urban design between 1600 and 1800. Specific subject to be announced.

687 Seminar in Nineteenth-Century Architecture

Fall or spring. 4 credits. Prerequisites: Architecture 387 or permission of instructor. Not offered every year.

Hours to be announced. M. Woods and staff.

Historical topics in European architecture and urbanism in the nineteenth century. Specific subject to be announced.

688 Seminar in Twentieth-Century Architecture

Fall or spring. 4 credits. Prerequisites: Architecture 388 or permission of instructor. Not offered every year.

Hours to be announced. C. Otto.

Special topics in the history of architecture and urban design in Europe and America during the twentieth century. Specific subject to be announced.

690 Seminar in American Architecture

Fall or spring. 4 credits. Prerequisites: Architecture 390-391 or permission of instructor. Not offered every year.

Hours to be announced. M. Woods and staff.

Historical topics in the architecture of the nineteenth and twentieth centuries in the United States. Specific subject to be announced.

693 Seminar in the History of American City Planning (also City and Regional Planning 660)

Fall. 3 credits. Prerequisites: Architecture 393 or permission of instructor.

Hours to be announced. Staff.

A research seminar in which each student selects a topic for oral presentation followed by the completion of a research paper. Early sessions examine the scope of planning history, its relations to other disciplines, sources of written and graphic materials, and the uses of historical evidence in interpreting urban planning and development.

696 Seminar in the History of Architecture and Urban Development

Fall or spring. 4 credits. Prerequisites: permission of instructor. Not offered every year.

Hours to be announced. Staff.

Topic to be announced.

697 Seminar in the History of Architecture and Urban Development

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year.

Hours to be announced. C. Otto.

Topic to be announced.

698 Seminar in the History of Architecture and Urban Development

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year.

Hours to be announced. M. Woods.

Topics to be announced.

699 Seminar in the History of Architecture and Urban Development

Fall or spring. 4 credits. Prerequisite: permission of instructor.

Hours to be announced. Staff.

Topic to be announced.

Independent Study, Thesis, Dissertation

299 Undergraduate Independent Study in the History of Architecture

Fall or spring. Variable credit (maximum, 3). Prerequisite: permission of instructor. May not be taken by students in design to satisfy undergraduate history requirements.

Hours to be announced. Staff.

Independent study for undergraduate students.

499 Undergraduate Thesis in the History of Architecture

Fall or spring. 4 credits. For B.S. honors candidates in history only.

Hours to be arranged. Staff.

799 Graduate Independent Study in the History of Architecture and Urban Development

Fall or spring. Variable credit. Prerequisite: permission of instructor.

Hours to be announced. Staff.

Independent study for graduate students.

899 M.A. Thesis in History of Architecture and Urban Development

Fall or spring. Variable credit.

Hours to be announced. Staff.

Independent study for the master's degree.

999 Ph.D. Dissertation in History of Architecture and Urban Development

Fall or spring. Variable credit.

Hours to be announced. Staff.

Independent study for the doctoral degree.

ART

R. Bertoia, Z. Blum, S. Bowman, J. Cole, N. D. Daly, M. Hitchcock, V. G. Kord, J. N. Locey, E. Meyer, E. Mikus, G. Page, B. Perlus, S. Poleskie, J. L. Squier, W. S. Taft, K. WalkingStick, and visiting critics.

Undergraduate Program

The undergraduate curriculum in art, leading to the degree of Bachelor of Fine Arts, provides an opportunity for the student to combine a general liberal education with the studio concentration required for a professional degree. During the first three semesters all students follow a common course of study designed to provide a broad introduction to the arts and a basis for the intensive studio experience in the last three years. Beginning with the fourth term, students concentrate on painting, sculpture, photography, or printmaking. They may elect additional studio work in any of these subjects during the last two years, with the consent of the instructor, providing the courses are taken in sequence and at the hours scheduled. These courses are designed to promote a knowledge and critical understanding of these arts and to develop the individual student's talent. All members of the faculty in the Department of Art are active, practicing artists, whose work represents a broad range of expression.

Studio courses occupy approximately one-half of the student's time during the four years at Cornell; the remainder is devoted to a diversified program of academic subjects with a generous provision for electives.

The curriculum in art is an independent program of study within the College of Architecture, Art, and Planning. However, the intimate relationships between the fine arts and training in architecture and city planning is a source of special strength in the Cornell program and affords unusual benefits to the students in these three disciplines.

Although the undergraduate curriculum in art is an excellent background for a career in applied art and offers courses in the use of graphics in modern communications, no specific technical courses are offered in such areas as interior design, fashion, or commercial art.

The department discourages accelerated graduation. However, a student may petition for consideration of early graduation by submission of a petition to the faculty before course enrollment in the spring semester of the student's junior year.

A candidate for the B.F.A. degree who also wants to earn a Bachelor of Arts degree from the College of Arts and Sciences can arrange to do so. This decision should be made early in the candidate's career (no later than the third semester), so that he or she can petition to be registered in both colleges simultaneously. Each student is assigned an adviser in the College of Arts and Sciences to provide needed guidance. Those students who are interested primarily in the history rather than in the practice of art should apply for admission to the College of Arts and Sciences with the objective of pursuing a major in the Department of History of Art in that college. Department of Art studio courses may then be taken as electives.

The B.F.A. program is designed so that students may fulfill the degree requirements of 130 credits with a minimum of 64 credits taken in the Department of Art and a minimum of 50 credits taken outside the department. Within these ranges, students may design their own programs subject to the following limitations:

- 1) Of the minimum of 50 elective credits to be taken outside the Department of Art, 12 credits must be in English, history, or other humanities offered in the College of Arts and Sciences. In the first two years 9 credits in history of art at the 200 level or higher or in architectural history must be completed. An additional 12 credits in art history at the 200 level or higher or in architectural history must be completed in the last two years. Also, 12 of the total 21 required credits must be in introduction to art history courses at the 200 level.
- 2) Students must also plan their programs to complete 30 credits in courses in one of the following studio areas: painting, sculpture, printmaking, or photography, or they should plan to complete 20 credits in each of two of the above areas. Drawing may be taken for 20 credits along with any of the other disciplines as part of a dual concentration. In the area of photography, students must also complete Art 263 and 264. Students should plan to complete all fourth-year studio concentration courses. Students must also complete a senior thesis in one area of concentration and are required to participate in the Senior Exhibition.

The university requirement of two terms in physical education must be met.

A candidate for the B.F.A. degree at Cornell is required to spend the last two terms of candidacy in residence at the university, subject to the conditions of the Cornell faculty legislation of November 14, 1962.

Students who transfer into the undergraduate degree program in art must complete a minimum of four terms in residence at Cornell and a minimum of 60 credits at the university, of which 30 credits must be taken in the Department of Art, including four terms of studio work. No student may study in absentia for more than two terms.

Rome Program

Students in good standing who have completed the requirements of the first two years of the curriculum are eligible for participation in the Rome Program. Students are admitted to the program by application and review of their record. The Rome studio is offered by the Department of Art. Additional courses in art and architectural history, contemporary Italian culture, and Italian language are offered by other departments participating in the program.

Curriculum

Students are expected to take an average course load of 16 credits per semester during their four years. They must complete a minimum of two courses each in painting, sculpture, printmaking, and photography and four in drawing by the end of the third year. All studio courses may be repeated for credit.

First Year

<i>Fall Term</i>	<i>Credits</i>
110 Color, Form, and Space	3
111 Introductory Art Seminar	1
121 Introductory Painting	3
141 Introductory Sculpture	3
151 Introductory Drawing	3
Elective	3

Spring Term

One of the following:	3
131 Introductory Etching	
132 Introductory Graphics	
133 Introductory Lithography	
151 Introductory Drawing	3
161 Introductory Photography	3
Art history elective	3 or 4
Elective	3 or 4

Second Year

<i>Fall Term</i>	<i>Credits</i>
Art studio (two courses)	6
Art history elective	3 or 4
Elective(s)	6 or 7
<i>Spring Term</i>	
Art studio (two courses)	6
Art history elective	3 or 4
Elective(s)	6 or 7

Third Year

<i>Fall Term</i>	<i>Credits</i>
Art studio (one course minimum)	3-8
Issues of Contemporary Art	3
Electives	5-10

Spring Term

Art studio (one course minimum)	3-8
Art history elective	3 or 4
Electives	4-10

Fourth Year

<i>Fall Term</i>	<i>Credits</i>
Fourth-year studio concentration	6
Art history elective	3 or 4
Electives	5 or 6
<i>Spring Term</i>	
Senior thesis studio concentration	6
Art history elective	3 or 4
Electives	5 or 6

Course Information

Most courses in the Department of Art are open to students in any college of the university who have fulfilled the prerequisites and who have permission of the instructor.

Fees are charged for all Department of Art courses. For fine arts majors the fee is \$20 each semester. Students from outside the department are charged \$10 a course. In addition, *there are darkroom fees for all photography courses* (these fees are subject to change): for in-college students the fee is \$55 each semester, and for out-of-college students the fee is \$55 plus \$10 per term course fee.

To take advantage of the special opportunities afforded by summer study, the department has developed several summer-only courses. Students wanting to satisfy Cornell degree requirements may petition to have these courses substituted for fall- or spring-term required courses.

Courses in Theory and Criticism

110 Color, Form, and Space

Fall or spring. 3 credits. Fall enrollment limited to B.F.A. candidates.
M 9:30-11. N. Daly.

A study of traditional and contemporary ways of drawing and painting. An analysis of color theory and pictorial space.

111 Introductory Art Seminar

Fall. 1 credit. Limited to B.F.A. candidates.
F 1:25-3.

Students meet for one hour each week with a different member of the faculty. The varying artistic interests of the staff are presented and discussed.

311 Issues in Contemporary Art

Fall. 3 credits.

Hours to be arranged. S. Poleskie.
A seminar course in issues of contemporary art, including lectures by visiting artists.

610 Seminar in Art Criticism

Fall or spring. 2 credits; may be repeated for credit. Four terms required for M.F.A. candidates.

Hours to be arranged. Staff.
Historical and modern critical opinions and their relation to problems in the theory of art are studied.

Studio Courses in Painting

121 Introductory Painting

Fall, spring, or summer. 3 credits.

Hours to be arranged. Staff.

An introduction to the problems of artistic expression through the study of pictorial composition; proportion, space, shapes, and color as applied to abstract and representational design.

123 Landscape Painting

Summer. 3 credits.

Class meets outdoors at selected sites in the Ithaca area. A different motif is explored each week. Pen, pencil, and water- or oil-based colors (optional) are the materials employed. Analysis and discussion of the landscape work of Corot, Cézanne, van Gogh, Seurat, and others are included.

124 Painting and Drawing

Variable credit (maximum 5). Summer only.

A special summer abroad course with emphasis on artistic expression and techniques, for students at all levels of skill. Included will be a mixture of painting and drawing assignments, self-initiated projects, and drawing sessions with a live model.

221 Painting II

Fall or spring. 3 credits. Prerequisite: Art 121 or permission of instructor.

Hours to be arranged. Staff.

A continuation of Art 121.

321 Painting III

Fall. 4 credits. Prerequisite: Art 221 or permission of instructor.

Hours to be arranged. Staff.

Continued study of the principles of painting and the selection and expressive use of materials and media. Group discussions and individual criticism.

322 Painting IV

Spring. 4 credits. Prerequisite: Art 321 or permission of instructor.

Hours to be arranged. Staff.

Continued study of the principles of painting and the selection and expressive use of materials and media. Group discussions and individual criticism.

421 Painting V

Fall. 6 credits. Prerequisite: Art 322 or permission of instructor.

Hours to be arranged. Staff.

Further study of the art of painting through both assigned and independent projects executed in various media. Instruction through group discussions and individual criticism.

422 Senior Thesis in Painting

Fall or spring. 6 credits. Prerequisite: Art 321 or 322 or permission of instructor.

Hours to be arranged. Staff.

Advanced painting project to demonstrate creative ability and technical proficiency.

721-722, 821-822 Graduate Painting

721 and 821, fall; 722 and 822, spring. Credit as assigned. May be repeated for credit.

Limited to M.F.A. students in painting.

Staff.

Students are responsible, under staff direction, for planning their own projects and selecting the media in which they are to work. All members of the staff are available for individual consultation.

Studio Courses in Graphic Arts

131 Introductory Intaglio

Fall, spring, or summer. 3 credits.

Hours to be arranged. E. Meyer.

A basic introduction to etching techniques, with emphasis on engraving, lift ground, relief printing, monotypes, and experimental techniques.

132 Introductory Graphics

Fall, spring, or summer. 3 credits.

Hours to be arranged. S. Poleskie.

An introduction to the two-dimensional thought process and the language of vision. Students will explore design projects and the use of graphic materials, including collage, pochoir, and screen printing.

133 Introductory Lithography

Fall, spring, or summer. 3 credits.

Hours to be arranged. G. Page.

The theory and practice of lithographic printing, using limestone block and aluminum plate. Basic lithographic techniques of crayon, wash, and transfer drawing are studied.

231 Intaglio Printing II

Fall or spring. 3 credits. Prerequisite: Art 131 or permission of instructor.

Hours to be arranged. E. Meyer.

Continuation of the study and practice of methods of intaglio printing, with emphasis on techniques and color.

232 Advanced Screen Printing (Book Arts)

Spring. 3 credits. Prerequisite: Art 132 and Art 161 or permission of instructor.

Hours to be arranged. S. Poleskie.

Students will expand their knowledge of screen printing to include photo stencil and printing on diverse materials such as cloth and plastic with the goal of producing a book or a portfolio of prints by the end of the semester.

233 Lithography II

Fall or spring. 3 credits. Prerequisite: Art 133 or permission of instructor.

Hours to be arranged. G. Page.

Continuation of the study and practice of lithographic printing, with emphasis on color.

331 Printmaking III

Fall or spring. 4 credits. Prerequisite: Art 231, 232, or 233 or permission of instructor.

Hours to be arranged. Staff.

Study of the art of graphics through both assigned and independent projects. Work may concentrate in any one of the graphic media or in a combination of media.

332 Printmaking IV

Fall. 4 credits. Prerequisite: Art 331 or permission of instructor.

Hours to be arranged. Staff.

Continuation and expansion of Art 331.

431 Printmaking V

Spring. 6 credits. Prerequisites: Art 332 or permission of instructor.

Hours to be arranged. Staff.

Further study of the art of graphics through both assigned and independent projects executed in various media. Instruction through group discussions and individual criticism.

432 Senior Thesis in Printmaking

Fall or spring. 6 credits. Prerequisite: Art 331 or 332 or permission of instructor.

Hours to be arranged. Staff.

Advanced printmaking project to demonstrate creative ability and technical proficiency.

731-732, 831-832 Graduate Printmaking

731 and 831, fall; 732 and 832, spring. Credit as assigned; may be repeated for credit.

Limited to M.F.A. candidates in graphic arts.

Prerequisite: permission of instructor.

Staff.

Students are responsible, under staff direction, for planning their own projects and selecting the media in which they will work. Members of the staff are available for consultation; discussion sessions of work in progress are held.

Studio Courses in Sculpture

141 Introductory Sculpture

Fall, spring, or summer. 3 credits.

Hours to be arranged. Staff.

A series of studio problems introduce the student to the basic considerations of artistic expression through three-dimensional design, i.e., modeling in Plasteline, building directly in plaster, casting in plaster, and constructing in wood and metal.

241 Sculpture II

Fall or spring. 3 credits. Prerequisites: Art 141 or permission of instructor.

Hours to be arranged. Staff.

Various materials, including clay, plaster, wood, stone, and metal, are used for exercises involving figurative modeling, abstract carving, and other aspects of three-dimensional form and design. Beginning in the second year, students are encouraged to explore the bronze casting process. The sculpture program, which is housed in its own building, contains a fully equipped bronze casting foundry.

341 Sculpture III

Fall. 4 credits. Prerequisite: Art 241 or permission of instructor.

Hours to be arranged. Staff.

Continued study of the principles of sculpture and the selection and expressive use of materials and media. Group discussions and individual criticism.

342 Sculpture IV

Spring. 4 credits. Prerequisite: Art 241 or permission of instructor.

Hours to be arranged. Staff.

Continuation and expansion of Art 341.

441 Sculpture V

Fall. 6 credits. Prerequisite: Art 342 or permission of instructor.

Hours to be arranged. Staff.

Further study of the art of sculpture through both assigned and independent projects executed in various media. Instruction through group discussions and individual criticism.

442 Senior Thesis in Sculpture

Fall or spring. 6 credits. Prerequisite: Art 341 or 342 or permission of instructor.

Hours to be arranged. Staff.

Advanced sculpture project to demonstrate creative ability and technical proficiency

741-742, 841-842 Graduate Sculpture

741 and 841, fall; 742 and 842, spring. Credit as assigned. May be repeated for credit.

Limited to M.F.A. students in sculpture.

Staff.

Students are responsible, under staff direction for planning their own projects and selecting the media in which they are to work. All members of the staff are available for individual consultation. Weekly discussion sessions of works in progress are held.

Studio Courses in Photography

Darkroom fees for all photography courses (these fees are subject to change):

In-college students \$55 per term

Out-of-college students—\$55 plus \$10 per term course fee.

161 Introductory Photography I (also Architecture 251)

Fall, spring, or summer. 3 credits.

Hours to be arranged. Staff.

A basic lecture-studio course in black and white photography for beginners. Emphasis is on basic camera skills, darkroom techniques, and understanding of photography imagery.

167 Photography

Variable credit (maximum 5). Summer only.

A special summer-abroad course with emphasis on both the techniques and aesthetics of black-and-white photography, for students at all levels of skill. Initial photographic assignments will be followed by other projects of the student's own choosing.

168 Black-and-White Photography

Summer. 3 credits. Fee, \$60.

Intended for students at all levels, from introductory to advanced. Emphasis on camera skills, darkroom techniques, and the content of black-and-white photographic imagery.

169 Color Photography

Summer. 3 credits. Fee, \$60.

Intended for students at all levels, from introductory to advanced. Emphasis on camera skills, darkroom techniques, and the content of color photographic imagery.

261 Photography II (also Architecture 351)

Fall, spring, or summer. 3 credits. Prerequisites: Art 161 or Architecture 251, or permission of instructor.

Hours to be arranged. Staff.

A continuation of Introductory Photography I.

263 Color Photography

Fall or spring. 3 credits. Prerequisite: Art 161 or permission of instructor.

Hours to be arranged. Staff.

A studio course in color photographic processes, including color film developing and color printing. Emphasis is on camera skill, color techniques, image content, and creative use of color photography.

264 Photo Processes

Fall or spring. 3 credits. Prerequisite: Art 161 or permission of instructor.

Hours to be arranged. Staff.

A studio course in alternate and nonsilver photographic processes. Emphasis is on camera skill, basic techniques and processes, image content, and creative use of photo processes.

265 Studio Photography

Fall or spring. 3 credits. Prerequisite: Art 161 or permission of instructor.

Hours to be arranged. Staff.

A course in the use of medium- and large-format cameras that explores technique, lighting, and the use of larger-format cameras for personal expression both in the studio and outdoors.

361 Photography III

Fall or summer. 4 credits. A studio course intended for photography majors and other qualified students. Prerequisite: Art 261, 262, or 263 or permission of instructor.

Hours to be arranged. Staff.

Continued study of creative use of photography, with emphasis on specialized individual projects.

362 Photography IV

Spring. 4 credits. A studio course intended for photography majors and other qualified students. Prerequisite: Art 361 or permission of instructor.

Hours to be arranged. Staff.

A continuation of Art 361.

379 Independent Studio

Summer. Credit by arrangement.

Hours by arrangement. Staff.

Students who have the interest and ability to progress beyond the problems of their particular course may register for additional credits. Students plan courses of study or projects that must meet the approval of the instructors they have selected to guide their progress and criticize the results. A course fee may be charged.

461 Photography V

Fall. 6 credits. Prerequisite: Art 361 or permission of instructor.

Hours to be arranged. Staff.

A studio course intended for photography majors and other qualified students.

462 Senior Thesis in Photography

Fall or spring. 6 credits. Prerequisite: Art 461 or permission of instructor.

Hours to be arranged. Staff.

A studio course intended for photography majors and other qualified students. Advanced photography project to demonstrate creative ability and technical proficiency.

751-752, 851-852 Graduate Photography

751 and 851, fall; 752 and 852, spring. Credit as assigned. May be repeated for credit.

Limited to M.F.A. students in photography.

Prerequisite: permission of instructor.

Staff.

Students are responsible, under staff direction, for planning their own projects and selecting the media in which they will work. Members of the staff are available for consultation. Discussion sessions of work in progress are held.

Studio Courses in Drawing

151 Introductory Drawing

Fall, spring, or summer. 3 credits.

Hours to be arranged. Staff.

A basic drawing course in the study of form and techniques. Contemporary and historical examples of figure, still life, and landscape drawing are analyzed in discussion.

158 Conceptual Drawing

Summer. 3 credits.

Emphasis on drawing from the imagination.

The generation of ideas and their development in sketches is stressed. The intent is not to produce finished art but rather to experience a series of problems that require image and design concepts different from those of the artist working directly from nature.

159 Life and Still-Life Drawing

Summer. 3 credits.

The human figure and still life are studied both as isolated phenomena and in relation to their environment. Focuses on helping the student observe and discover.

251 Drawing II

Fall or spring. 3 credits. Prerequisites: Art 151 or permission of instructor.

Hours to be arranged. Staff.

A continuation of Art 151 but with a closer analysis of the structure of the figure and a wider exploitation of its purely pictorial qualities.

[351 Drawing III

Fall or spring. 3 credits. Prerequisite: Art 251. Not offered 1989-90.

Staff].

352 Anatomy for Artists

Spring. 3 credits. Prerequisites: Art 151, 159, and 251 or permission of instructor.

Hours to be arranged. S. Taft.

Develops basic understanding of the structure of the human figure as it is relevant to artists through an in-depth study of the skeleton and muscle-tendon system. Focuses on improving understanding and skill in design and observation, as well as gaining an understanding of how the materials may be relevant to making art through the study of works by the masters.

Graduate Thesis

712 Graduate Thesis

Spring. Credit as assigned.

Staff.

For graduate students in their last term in the programs in painting, sculpture, printmaking, and photography.

Special Studio Courses

171 Computer Art

[Fall], spring, or summer. 3 credits. Not offered fall 1989.

Hours to be arranged. S. Bowman.

Introduction to the use of the microcomputer, various graphic art programs, and methods for the generation of abstract color images. Emphasis on the computer as a tool for making art.

371 Independent Studio

Fall, spring, or summer. Variable credit (maximum, 5). Students may register for two studios in a semester. May be repeated for credit. Prerequisite: written permission of instructor.

Department staff.

372 Special Topics in Art Studio

Fall, spring, or summer. Variable credit (maximum, 6).

Hours to be arranged. Staff.

An exploration of a particular theme or project.

400 Rome Studio

Fall or spring. 6 credits. Prerequisite: permission of instructor.

Staff.

The content for the Rome studio will be determined by the instructor. Emphasis will be divided between work accomplished in the studio and work executed outdoors in the environs of Rome. Media will consist primarily of painting, drawing, sculpture, and photography, or those assigned by the instructor.

471 Independent Studio

Fall, spring, or summer. Variable credit (maximum, 6). Students may register for two studios in a semester. May be repeated for credit. Prerequisite: written permission of instructor.

Department staff.

CITY AND REGIONAL PLANNING

D. B. Lewis, chair; L. Beneria, R. S. Booth, S. Christopherson, P. Clavel, S. Czamanski (emeritus), J. F. Forester, W. W. Goldsmith, W. Isard, B. G. Jones, B. Kelly (emeritus), D. McClive, P. Olpadwala, K. C. Parsons, J. W. Reps (emeritus), S. Saltzman, S. W. Stein, M. A. Tomlan, R. T. Trancik, T. Vietorisz (visiting), M. Wilder

The department offers several programs of study at both the undergraduate and graduate levels.

The Undergraduate Program in Urban and Regional Studies

The four-year Bachelor of Science program in urban and regional studies offers students an opportunity to direct their education toward an understanding of urban and regional problems and solutions. The curriculum acquaints students with the physical, social, political, economic, and environmental forces that confront cities and regions and contribute to their growth and decline. The curriculum draws on strengths in the department and is supplemented by course work in related areas in other departments at Cornell.

The first two years in this program are a general education in the liberal arts and sciences. Writing and quantitative skills are developed, and an exposure is provided to course work in the natural and social sciences, the expressive or design arts, and the humanities. Two introductory courses in urban and regional issues are also taken during the first two years. During the junior and senior years ten specific courses are taken to provide a significant foundation of knowledge in the major. Additional directed electives will permit the student to gain greater depth of knowledge and acquire a broader understanding of topics of individual interest. These courses may be in any related subject, including, for example, housing, urban design, neighborhoods, energy, environmental controls, economic development, architecture, land use, social policy, and international planning.

Basic Requirements for Graduation

- 1) **General education** (during the first four terms)
 - a. Freshman writing seminars: 6 credits
 - b. Foreign language: qualification in one foreign language
 - c. An approved course sequence (minimum of 6 credits) in each of the five categories below: 30 credits
 1. a. Biological sciences or
b. Physical sciences
 2. a. Social sciences (other than economics) or
b. History
 3. a. Humanities or
b. Expressive arts or design arts
 4. Mathematics
 5. Economics
- 2) **Major concentration:** 50 to 52 credits
 - a. Specific course requirements (38 to 40 credits)
 - CRP 100, The American City
 - CRP 101, The Global City
 - CRP 314, Planning, Power, and Decision Making, or Government 311, Urban Politics
 - CRP 315, The Progressive City
 - CRP 320, Introduction to Quantitative Methods I
 - CRP 321, Introduction to Quantitative Methods II
 - CRP 361, Seminar in American Urban History, or History 332 or 333, The Urbanization of American Society
 - CRP 400, Introduction to Urban and Regional Theory
 - CRP 401, Urban Political Economy
 - CRP 480, Environmental Politics
 - CRP 481, Principles of Spatial Design and Aesthetics
 - CRP 482, Urban Land Use Concepts
 - b. Directed electives (related to urban and regional studies): 12 credits (at least 6 credits to be taken outside CRP)
- 3) **Free electives:** 26 to 28 credits
 - a. 12 credits during first four terms
 - b. 14 to 16 credits during last four terms

Required courses for graduation: 34**Required Credits: 120**

The university requirement of two terms of physical education must be met during the first two terms.

Honors Program

Each year a small number of well-qualified junior-year students will be accepted into the honors program. Each honors student will develop and write a thesis under the guidance of his or her faculty adviser. There will be a seventy-five-page limit on each honors thesis.

Off-Campus Opportunities

Cornell-in-Washington Program. Students in good standing may be eligible to earn degree credits in the Cornell-in-Washington program through course work and an urban-oriented internship in Washington, D.C. Students may work as interns with congressional offices, executive-branch agencies, interest groups, research institutions, and other organizations involved in the political process and public policy. Students also select one or two other seminars from such fields as government, history, economics, human development and family studies, architectural history, and agricultural economics. All seminars are taught by Cornell faculty members and carry appropriate credit toward fulfillment of major, distribution, and other academic requirements.

Cornell Abroad. Cornell encourages qualified undergraduates to study abroad in the belief that exposure to foreign cultures is an important component of a good education. In an increasingly interdependent world, the experience of living and learning in a foreign country is invaluable. With this in mind, the university is continuing to develop study abroad opportunities. Current programs are available in Great Britain, Spain, and Germany. Opportunities in Asia, the Mideast, and France should be forthcoming. The department encourages its students to explore these opportunities.

Cornell-in-Rome Program. The College of Architecture, Art, and Planning has a teaching facility in Rome located in the sixteenth-century Palazzo Massimo. Students in good standing are eligible to earn degree credits through course work undertaken with Cornell faculty assigned to Rome and with accredited instructors. Courses are available in areas of urban development, regional development, and architecture and art.

Research and fieldwork. Students are welcome to work with department faculty members on research or other opportunities that are appropriate to their particular interests. Fieldwork and community-service options also exist for students in the Urban and Regional Studies Program.

Additional Degree Options

Linked degree options. Urban and regional studies students have the opportunity to earn both a Bachelor of Science degree and a Master of Regional Planning (M.R.P.) degree in a fifth year of study. Ordinarily the professional M.R.P. degree requires two years of work beyond that for the bachelor's degree. This arrangement shortens that time by about one year. A minimum of 30 credits and a master's thesis or thesis project are required for the M.R.P. degree. Students apply to the Graduate School, usually in the senior year.

Dual degree option. A student in the Cornell College of Arts and Sciences currently can earn both a B.A. in an arts college major, plus a B.S. in urban and regional studies in a total of five years. Special requirements have been established for this dual degree program. Cornell students interested in pursuing the dual degree program should contact either the director of the Urban and Regional Studies Program or the appropriate dean of the College of Arts and Sciences for further information.

Admissions Requirements and Procedures

Among the most important criteria for admission to the Urban and Regional Studies Program are intellectual potential and commitment—a combination of ability, achievement, motivation, diligence, and use of educational and social opportunities. Nonacademic qualifications are important as well. The department encourages students with outstanding personal qualities, initiative, and leadership ability. Above all, the department seeks students with a high level of enthusiasm and depth of interest in the study of urban and regional issues. Applicants must complete a university admission application.

Transfer Students

In most cases, transfer applicants should no longer be affiliated with a high school and should have completed no fewer than 12 credits of college or university work at the time of application. A high school student who has completed graduation requirements at midyear and is taking college courses for the rest of the academic year should apply as a freshman. Prospective candidates who believe that their circumstances are exceptional should consult with the director of admissions in the Cornell division of interest to them before filing an application.

Forms for transfer application and financial aid are available from the Cornell University Office of Admissions, 410 Thurston Avenue, Ithaca, New York 14850-2488. Official transcripts of all high school and college work must be submitted along with SAT or ACT scores and letters of recommendation.

It is desirable for prospective transfers to have taken at least 6 credits in English. In addition, students should have taken basic college-level courses distributed across the natural and social sciences, humanities, and mathematics. Those applicants whose previous course work closely parallels the general education portion of the urban and regional studies curriculum will have relative ease in transfer. However, as there are no specific requirements for transfer, students with other academic backgrounds, such as engineering, architecture, fine arts, management, and agriculture, are eligible to apply.

Although an interview is not required, applicants are urged to visit the campus. Applicants who want further information regarding urban and regional studies may contact Professor Richard S. Booth, Program Director, Urban and Regional Studies, Cornell University, 106 West Sibley Hall, Ithaca, New York 14853-6701 (telephone: 607/255-4613).

The Graduate Program in City and Regional Planning

Planning seeks to guide the development of the economic, social, natural, and built environments so that the needs and aspirations of all people may be better satisfied.

The major concentrations of course work in city and regional planning are in the following areas:

Built environment and urban development planning is concerned with physical facilities; the social, economic, and environmental forces that affect their design; and the process of development, plan making and administration.

History and historic preservation

planning is a special program of study preparing students for work in history, analysis, and preservation of buildings, urban environments, and neighborhoods, including downtown business areas.

Regional planning and regional science are concerned with socioeconomic issues and functional planning at the regional level, the forces that generate economic growth and social development, and the ways in which resources can best be used.

Local and regional economic development is concerned with understanding and influencing how economic change may be harnessed to the benefit of communities, counteracting plant closings and more general regional decline and stimulating more equitable programs of socioeconomic change and development.

International planning offers a broad range of courses in international economic development, development planning, and political economy.

Quantitative methods and policy analysis courses are offered to prepare planners and researchers for a variety of situations and problems.

Complementing these concentrations, planning theory and political economy courses examine the organizational and planning processes and the political and economic conditions in which planning and international development operate.

Several graduate degrees are offered: the Ph.D.; the Master of Regional Planning (M.R.P.), for a two-year program; the Master of Arts (M.A.) in historic preservation planning, for a two-year program; and, in special cases, the Master of Professional Studies (International Development) [M.P.S.(I.D.)], for the twelve-month international planning program.

Off-Campus Opportunities

Rome Program. Graduate students have the opportunity to spend one or two semesters in Rome, studying at Cornell's center at the Palazzo Massimo. Instruction is given by Cornell professors-in-residence and by other faculty. The program is structured to include work assignments in one of the international development organizations headquartered in Rome.

Course Information

Most courses in the Department of City and Regional Planning are open to students in any college of the university who have fulfilled the prerequisites and have the permission of the instructor.

The department attempts to offer courses according to the information that follows. However, students should check with the department at the beginning of each semester for late changes.

Undergraduate Program in Urban and Regional Studies

100 The American City

Fall. 3 credits.

M W F 9:05. M. Wilder.

An introductory course on the urban problems and opportunities facing the majority of this country's population as we approach the last decade of the twentieth century. Readings, discussions, and brief papers exploring topics ranging from suburban development to central city poverty, from environmental threats to downtown revitalization, and from municipal finance to the new position of women in the urban economy.

101 The Global City: People, Production, and Planning in the Third World

Spring. 3 credits.

T R 10:10-11:25. P. Olpadwala.

A critical look at the physical and social development of giant cities in the Third World. Their origins, roles, contributions, and shortcomings are examined. Their place in world political economy is evaluated. Policy prescriptions for their principal problems are discussed.

108 FWS: Environment and Society: The Delicate Balance

Fall. 3 credits.

M W F 11:15. R. S. Booth.

This freshman writing seminar addresses the delicate balance that must be maintained between societal needs and demands and environmental quality. It uses several important texts that examine and challenge society's widespread and deep-rooted tendencies to ignore the social, economic, and environmental consequences of degrading the natural environment. Students work extensively on improving writing skills.

109.01 Freshman Writing Seminar

Fall or spring. 3 credits.

Hours to be arranged. Staff.

Topic to be announced.

109.02 FWS: In Search of American Cities

Spring. 3 credits.

M. Wilder.

An unusual course structure is used to give students broad exposure to ongoing changes in the social, political, economic, and physical character of U.S. cities. Each week students will "visit" a different city by way of readings, oral presentations, discussions, and brief papers that touch on major aspects of the city's economic, social, and political history; the city's physical character and regional context; and recent planning or policy issues.

218 Economics of Gender

Spring. 3 credits.

T R 3:35-5:30. L. Beneria.

The emphasis in this course will be on the economic aspects of women and work: What are the consequences of women's concentration in reproductive work? What economic role does domestic work play within the larger economy? What are the consequences of occupational segregation by gender? Why is the wage gap between men and women not disappearing? What is the role of discrimination? What is the condition of women in other countries? Throughout the course we will examine different analytical frameworks and distinguish between different feminist perspectives dealing with those questions.

314 Planning, Power, and Decision Making

Fall 3 credits.

M 1:25-3:20. J. Forester.

This seminar examines various bases of political and professional power. We ask, What do professionals who want to serve the public need to know about power and decision-making processes in the institutional settings in which they operate? How and why can professionals make a difference when facing problems characterized by great complexity and severe inequalities among affected groups?

315 The Progressive City

Spring. 3 credits.

T R 1:25-3:20. P. Clavel.

A review of attempts to incorporate the interest of working-class and poor constituencies through majority control of local governments. Topics to be covered include the role of the city in class formation; historical perspectives on urban political administration; contemporary populist, socialist, and progressive urban governments; and the search for an economic basis for progressive reforms.

320 Introduction to Quantitative Methods I

Fall. 3 credits.

M W 3:35-5. Staff.

An introduction to the role and use of quantitative methods in the study of urban and regional issues. Emphasis will be on statistical, mathematical, and computer methods for the formulation, analysis, and testing of hypotheses and models of social, economic, and physical phenomena of cities and regions. The first semester will cover applicable methods in probability, descriptive statistics, estimation, hypothesis testing, and regression.

321 Introduction to Quantitative Methods II

Spring. 3 credits.

M W 3:35-5. Staff.

A continuation of City and Regional Planning 320. The second semester will focus on regression and other methods commonly used to analyze urban and regional phenomena, including techniques for decision analysis, linear programming, and cost-benefit analysis and simulation, among others. Strengths and weaknesses of those methods will also be considered.

361 Seminar in American Urban History (also CRP 662)

Spring. 3 credits. Prerequisite: permission of instructor.

W 2:30-4:30. K. C. Parsons.

Seminar in the historical evolution of the American city. Emphasis on factors in urban growth, the process of urbanization, the urban reform movement, and intellectual and social responses to the city.

382 Urban Housing: Sheltered vs. Unsheltered Society (also CRP 582)

Fall. 4 credits.

M. Wilder.

Homelessness is the latest in a continuing list of terms to describe unmet housing needs. To understand how and why such needs persist, even in good economic times, one must examine the nature of interactions between housing policies and housing market forces. This course examines the complex interaction of public and private actions in the development and redevelopment of urban housing.

More specifically, the course seeks to investigate the many ways in which private and public policy decisions determine which groups in society will have access to housing. This course is appropriate for students with an interest in urban housing and a background in any of the following areas: urban economics, urban sociology, anthropology, history, or geography. The course will consist of lectures, a wide variety of readings, and guest speakers. Students will be evaluated on the basis of class discussions, two exams, a 15-20 page paper, and an oral presentation.

[387 Urbanization and the Environment

Fall. 4 credits. Offered alternate years. Not offered 1989-90.

R. S. Booth.

This seminar explores a series of issues related to the impacts of urbanization on the natural environment. Examples of these issues include: waste management, water supply, transportation, energy generation, and maintenance of open spaces. The seminar will include discussion sessions and a series of field trips. Students will prepare short reports, work on a team project, and make class presentations.]

400 Introduction to Urban and Regional Theory

Fall. 4 credits. Open to juniors and seniors.

M W F 11:15. B. G. Jones.

Introductory review of theories dealing with the spatial distribution of population and economic activity, drawn from various social science disciplines such as geography, economics, and sociology. Review of recent research dealing with such topics as population distribution, migration, location of industry and economic activity, and the spatial organization of urban and regional social systems.

401 Seminar in Urban Political Economy

Spring. 4 credits. Prerequisites: for URS students, CRP 400; for other students, permission of the instructor.

W. W. Goldsmith.

The world economy, the global city, and social change. Population, technology, and work in industrial and developing countries. Race, ethnicity, and nationality. Profits, subsistence, and poverty. Students will read and direct discussions on outstanding texts, write book reviews, and complete a research paper comparing one issue in two cities.

404 Urban Economics (also CRP 604)

Fall. 4 credits. Prerequisite: basic economics.

T 10:10-12:05. Staff.

Urban phenomena are analyzed from an economic point of view. Areas examined include economic aspects of urbanization processes and policies, determinants of urban growth and decline, urban land and housing markets, urban transportation, and urban public services. Some time will be spent in discussing problems of cities in developing countries.

[413 Planning and Political Economy I

Fall. 4 credits. Not offered 1989-90.

T 1:25-3:20. Staff.

This course deals with Marx's methodological approach and his elaboration in volume one of *Capital*. Topics will cover Marx's method, the labor theory of value, the labor process and surplus value, absolute and relative surplus value, the general law of capital accumulation, and the transition from feudalism to capitalism. Basic texts will be supplemented with readings and discussion about current urban problems.]

[414 Planning and Political Economy IISpring. 4 credits. Prerequisites: students must have read volume one of *Capital* and be generally familiar with Marx's approach. Not offered 1989-90.

T 1:25-3:20. Staff.

Introduction to volumes two and three of Marx's *Capital* and his Theories of Surplus Value. Discussion of selected topics among the circulation of capital, productive and unproductive labor, reproduction schemes, accumulation, the transformation of surplus value into profits, the transformation of value into prices of production, the tendency of the rate of profit to fall, and crises. Emphasis on interpretation of current urban problems.]

415 Gender Issues in Planning and Architecture

Spring. 3 or 4 credits.

T R 10:10-11:25. Staff.

In this course we will examine the role of gender in relation to urban policy, regional planning, and architecture. The course has two major objectives: (1) to provide a theoretical and empirical context for understanding how gender influences the form and allocation of space and (2) to explore concrete ways to address and ameliorate gender inequalities in the practice of planning and architecture.

417 Industrial Restructuring: Implications for State and Local Policy (also CRP 517)

Fall. 4 credits.

T R 10:10-11:25. Staff.

A basic introduction to new issues arising from the way in which national and international economic shifts are affecting diverse United States localities. The course will focus on intra-industry restructuring, the location of economic activities, and state and local economic policy. Cases will be drawn from a variety of industries and national situations, with specific application to New York and other Northeast locations.

421 Introduction to Computers in Planning (also CRP 522)

Fall. 4 credits.

Staff.

Students learn how to use microcomputers and software packages in the planning and problem-solving processes. Included are word processing, spreadsheets, mapping, and other types of packages that are useful for other classes and for professional work in the field. (WordPerfect, Lotus 1-2-3, dBase and MacGIS are examples of packages that have been taught in previous years.)

442 Social and Political Studies of Science (also Sociology 355)

Spring. 3 credits.

W 2:30-4:25. Staff.

A view of science less as an autonomous activity than as a social and political institution. We will discuss such issues as secrecy in science, ethical and value disputes, and the limits to scientific inquiry in the context of the changing relations between science and the public.

[452 Urban Policy, Planning, and Design in Practice]

4 credits. Fall or spring. Cornell-in-Washington course. Not offered 1989-90.

Hours to be arranged. K. C. Parsons.

Study and discussion of selected policy-issue areas and programs in city and regional planning and urban design. The historical context of ideas and issues will be covered in addition to critical reviews of specific programs such as equal access to housing, central city revitalization, neighborhood planning, urban aesthetics, transportation policy, etc. Field trips to selected projects in Washington and Baltimore.]

462 The American Planning Tradition (also Architecture 393)

Spring. 4 credits.

Staff.

A systematic review of American city planning history beginning with the earliest colonial settlements and ending with the era of the New Deal. An introductory lecture course requiring no previous exposure to planning or architecture. A prerequisite for students intending to take advanced seminars or independent studies in planning history.

480 Environmental Politics

Spring. 3 credits.

M W F 11:15. R. S. Booth.

Examines the politics of public decisions affecting the environment. Focuses on the roles played by different political actors, the powers of various interest groups, methods for influencing environmental decisions, and the political and social impacts of those decisions.

481 Principles of Spatial Design and Aesthetics (also Landscape Architecture 220)

Fall. 3 credits.

M W F 10:10. R. T. Trancik.

A lecture course that introduces the spatial and visual design vocabularies of cities. Aesthetic principles and theories of design are investigated for different types of urban spaces drawn from a variety of international examples, historic and modern. Included in the course are design methods and applications in the contemporary urban context of Europe and North America.

482 Urban Land Use Concepts.

Spring. 3 credits.

S. Stein.

Explorations of the use of land in urban areas, with an emphasis on the experience of North American cities. The course reviews use types, use characteristics, and use relationships in terms of conflicting social and economic demands. Concepts of organizing urban space in the past and present are reviewed. Physical planning and aesthetic issues are also discussed.

490 Student-Faculty Research

Fall or spring. 1-4 credits. Limited to undergraduate students in the Urban and Regional Studies Program. S-U grades only.

Hours to be arranged. Staff.

Research, reading, and/or writing project in which a student and faculty member choose a topic related to urban and regional studies.

492 Honors Thesis Research

Fall or spring. 4 credits. Limited to Urban and Regional Studies Program majors who have been selected as honor students by the department faculty.

Hours to be arranged. Staff.

Each selected student works with his or her thesis adviser.

493 Honors Thesis Writing

Fall or spring. 4 credits. Prerequisite:

Completion of CRP 492.

Hours to be arranged. Staff.

Each selected student works with his or her thesis adviser.

495 Special Topics

Fall or spring. 3 credits. Hours to be arranged.

Staff.

Graduate Courses and Seminars

Courses numbered from 500 to 599 and 600 to 699 are generally considered introductory or first-year courses; those numbered from 700 to 799 and 800 to 899 are generally considered more advanced. Upperclass undergraduate courses are numbered from 300 to 499. (Undergraduate students with the necessary prerequisites and permission of the instructor may enroll in courses numbered 500 and above.)

500 Urban and Regional Theory

Spring. 4 credits. Prerequisite: intermediate-level economics or sociology, or CRP 400.

T R 3:35-5:30. W. W. Goldsmith.

A review of attempts by the various social sciences to understand the contemporary city and its problems, particularly as seen by planners. Material is drawn from urban and regional economics, human ecology, urban sociology, psychology, anthropology, and geography in order to explain the location, size, form, and functioning of cities. Traditional and contemporary critical theory is examined as it applies to physical, social, and economic problems of the modern city. Major texts will be read, criticized, and discussed in seminars.

501 Introduction to Economics and Political Economy

Fall. 2 or 4 credits.

F 4:30-6:30, alternate S 10-12.

T. Vietorisz.

This course introduces students to the fundamentals of economics from the user's point of view. The course compares two major schools of thought that take a conflicting approach to political-economic problems of society: the mainstream school of traditional economics and the Marxian school of political economy. Concrete planning problems, with which the course illustrates theoretical points, appear in a very different light from these two perspectives. The course provides bases for independent judgment in assessing conflicting interpretations likely to be encountered in students' professional careers.

511 Concepts and Issues in Planning Practice

Fall. 4 credits.

T 3:35-5:30. P. Clavel.

A seminar for graduate students and others interested in an in-depth introduction to the main ideas and concepts that underlie the practice of city and regional planning. Weekly discussions will focus on selected articles and books. Interrelations between national, state, and local practices and policies, and developments in methodology, organization, and the political environment, will be explored.

[512 Introduction to Planning Theory]

Spring. 4 credits. Not offered 1989-90.

M 11:15-1:10. J. Forester.

Planning is a form of social intervention. It parallels and complements other important decision-making institutions such as voting, interest-group bargaining, and market exchange. This course provides cases and analysis describing examples of alternative forms of planning and the various arguments used to justify planning: market failure, democratic participation, advocacy, and expert judgment. Political, organizational, and practical-ethical aspects of planning practice are explored. The course covers the work of Dyckman, Piven, Krumholz, Marcuse, Lindblom, Friedmann, March, and others.]

513 Political Economy of Women and Work I

Fall. 4 credits.

W 7-10 p.m. L. Beneria.

This course deals with the question of how to understand and analyze the economic condition of women. Starting with general issues about the "question of origins," reproduction, and production, it then deals with different approaches to the analysis of women's work in the household and in the labor market. The empirical material will mostly concentrate on the United States, with some glances at other industrialized countries and the international economy.

514 Political Economy of Women and Work II

Spring. 4 credits.

W 7-10 p.m. L. Beneria.

Continuation of CRP 513. Focusing mostly on Third World countries, this course deals with the impact of economic development on women. In particular it deals with how changing economic structures affect household organization, labor-market dynamics, the division of labor, and women's condition in different societies. Topics include the analysis of current international development, such as the commoditization of life, globalization of production, the crisis of development, population growth, and foreign debt.

515 Gender Issues in Planning and Architecture (also CRP 415)

Spring. 3 or 4 credits. Offered alternate years.

T R 10:10-11:25. S. Christopherson.

In this course we will examine the role of gender in relation to urban policy, regional planning, and architecture. The course has two major objectives: (1) to provide a theoretical and empirical context for understanding how gender influences the form and allocation of space and (2) to explore concrete ways to address and ameliorate gender inequalities in the practice of planning and architecture.

517 Industrial Restructuring: Implications for State and Local Policy (also CRP 417)

Fall. 4 credits.
Staff.

A basic introduction to new issues arising from the ways in which national and international economic shifts are affecting diverse United States localities. The course will focus on intraindustry restructuring, the location of economic activities, and state and local economic policy. Cases will be drawn from a variety of industries and national situations, with specific application to New York and other locations in the Northeast.

520 Statistical and Mathematical Concepts for Planning

Fall. 4 credits.
Staff.

An introduction to statistical and mathematical concepts and methods of importance in planning policy analysis. Topics will include matrix algebra, probability, sampling, estimation, and regression as well as the use of a microcomputer statistical package.

521 Mathematical Foundation for Planning Analysis.

Spring. 1 credit. S-U only. Meets for two hours, once each week, for approximately half the semester.
Staff.

Review of mathematical foundations for planning analysis. Topics include probability statistics, mathematical functions, and matrix algebra. Intended for students with prior course work as a refresher course in preparation for higher-level courses in planning analysis. Departmental permission required.

522 Introduction to Computers in Planning (also CRP 421)

Fall. 4 credits.
Staff.

Students learn how to use microcomputers and software packages in the planning and problem-solving processes. Included are word processing, spreadsheets, mapping, and other types of packages that are useful for other classes and for professional work in the field. (WordPerfect, Lotus 1-2-3, dBase, and MacGIS are examples of packages that have been taught in previous years.)

541 The Politics of Technical Decisions I (also Government 628 and Sociology 515)

Fall. 4 credits. Cosponsored by the Program on Science, Technology, and Society.
W 2:30-4:25. Staff.

Political aspects of decision making in technical areas. Drawing from recent risk disputes, we will examine the origins and characteristics of "technical politics," the role of experts in government, and the problem of expertise in a democratic system. Alternatives to current decision-making procedures are explored.

542 The Politics of Technical Decisions II (also Government 629)

Spring. 4 credits. Prerequisite: CRP 541 or permission of instructors. Cosponsored by the Program on Science, Technology, and Society.
Hours to be arranged. Staff.

A continuation of City and Regional Planning 541, focusing on political aspects of decision making in technical areas. Drawing from recent risk disputes, we will examine the origins and characteristics of "technical politics," the role of experts in government, and the problem of expertise in a democratic system.

[545 Introduction to Public Policy Analysis and Management

Fall or spring. 3 credits. Not offered 1989-90.
S. Saltzman or staff.

Introduction to systematic methods and processes for analyzing issues and problems of public policy and management. Roles of economic analysis and of analytic techniques in public sector decision making will be reviewed and their respective strengths and weaknesses evaluated. Applications to a variety of public sector problem areas will be explored.]

546 Conflict Resolution in the Public Sector

Fall. 3 credits.

T 1:30-3:20, R 10:10-12:05. J. Forester.

This course will explore the theories and techniques of conflict resolution that are appropriate to the public sector. We will consider principles and strategies of negotiation, mediation, and collaborative problem solving. Authors to be read include Axelrod, Pruitt, Rubin, Raiffa, Fisher, Ury, and Susskind.

552 Urban Land-Use Planning I

Fall. 3 credits.

T R 2:30. S. Stein.

Surveys, analyses, and plan-making techniques for guiding physical development of urban areas; location requirements, space needs, and interrelations of land uses. Emphasis on residential, commercial, and industrial activities and community facilities; housing and neighborhood conditions. Lectures, seminars, and field exercises.

553 Urban Land-Use Planning II

Spring. 3 credits. Prerequisite: CRP 552 or permission of instructor.

TR 12:20. Staff.

In-depth consideration of special issues in urban land-use planning, such as industrial districts, large-scale integrated development, Planned Unit Development, public and institutional facilities, open space, land banking, central business districts, neighborhoods, energy impacts, transportation impacts, and others.

[554 Introduction to Planning Design

Fall. 3 credits. Not offered 1989-90.

T R 12:20. Staff.

Lectures, seminars, readings, and design exercises explore basic concepts and issues related to urban planning, urban design, site planning, and environmental awareness. Emphasis is on professional practice. Intended for students without design backgrounds, but others may enroll.]

555 Urban Systems Studio (also Landscape Architecture 602)

Spring. 6 credits. Prerequisite: permission of instructor.

M T R 1:25-4:25. R. T. Trancik.

Application of urban-design and town-planning techniques to specific contemporary problems of city environments. Issues of urbanism are investigated and applied to physical design interventions involving the street, square, block, garden, and park systems. Topics covered in the studio include urban land-use development, spatial systems and aesthetics, and public and private implementation of urban-design plans. This is a specially arranged collaborative studio with the Landscape Architecture Program.

556 Built-Environment Education Workshop

Spring. 4 credits.

Fieldwork hours to be arranged.

S. Stein.

Interdisciplinary teams of students from planning, architecture, landscape architecture, historic preservation, and other environmental design disciplines work in classrooms with schoolchildren and teachers to deepen their understanding of the built environment and to encourage their participation in the shaping of their own environment. Work in local schools is emphasized.

[557 Small-Town Community Design Workshop

Fall or spring. 2 or 4 credits. Not offered 1989-90.

Fieldwork hours to be arranged.

S. Stein.

An in-depth approach to specific problems facing the small town or small city. Various aspects of planning, historic preservation, landscape architecture, and design, including "Main Street" revitalization, street scape planning, storefront rehabilitation, signage, and comprehensive planning, are explored in a workshop setting. Working with real clients in nearby communities.]

558 City and Regional Planning Workshop

Fall or spring. 4 credits. S-U only. Fieldwork hours to be arranged.

S. Stein.

Students will work on urban issues, such as housing, traffic and parking, economic development, zoning, and related planning issues, with public or non-profit organizations in New York State. Projects are undertaken on a community-service basis for "clients" who specifically request planning assistance. Students work individually or in teams.

560 Documentation for Preservation (also Architecture 586)

Fall. 3 credits.

M 2:30-5:30. M. A. Tomlan.

Methods of identifying, recording, collecting, processing, and analyzing information dealing with historic and architecturally significant structures, sites, and objects.

561 Historic Preservation Planning Workshop: Surveys and Analyses (also Architecture 588)

Fall or spring. 4 credits.

Fall, T 2:30–5:30; spring, T 2:30–5:30.
D. McClive.

Techniques for the preparation of surveys of historic structures and districts; identification of American architectural styles, focusing on upstate New York; and explorations of local historical resources, funding sources, and organizational structures. Lectures and training sessions. Emphasis on fieldwork with individuals and community organizations.

562 Perspectives on Preservation (also Architecture 585)

Fall. 3 credits.

T 1:25–4:25. M. A. Tomlan.

Introductory course for preservationists. A survey of the historical development of preservation activity in Europe and America leading to a contemporary comparative overview. Field trips to notable sites and districts.

563 Problems in Contemporary Preservation Practice (also Architecture 584)

Spring. Variable credit.

T 12:20–2:15. M. A. Tomlan.

A review and critique of ongoing preservation projects and an investigation of areas of expertise currently being developed. Presented by staff and guest lecturers.

564 Building Materials Conservation (also Architecture 587)

Spring. 3 credits. Open to juniors, seniors, and graduate students.

R 12:20–2:15. M. A. Tomlan.

A survey of the development of building materials in the United States, chiefly during the nineteenth and early twentieth centuries, and a review of the measures that might be taken to conserve them.

565 Fieldwork or Workshop in History and Preservation

Fall or spring. Variable credit.

M W 7–9 p.m. M. A. Tomlan.

Work on applied problems in history and preservation planning in a field or laboratory setting or both.

567 Measured Drawing (also Architecture 583)

Fall. 3 credits. For undergraduate architecture students and graduate students in history and preservation. Prerequisite: permission of instructor.

R F 11:15–1:10. M. A. Tomlan.

Combines study of architectural drawing as historical documents with exercises in preparing measured drawings of small buildings. Presents the basic techniques of studying, sketching, and measuring a building and the preparation of a finished drawing for publication.

[568 Introduction to American Decorative Arts and Historic Interiors

Spring. 3 credits. Not offered 1989–90.

W 2:30–4:25. Staff.

An introductory survey of the design and evolution of the style of domestic furnishings and related utilitarian objects made in or imported for use in America from 1670 to 1900. Categories to be covered include furniture, glass, ceramics, metals, prints, and textiles. Objects of national significance as well as common items created in relative abundance outside the major urban style centers will be covered.]

582 Urban Housing: Sheltered vs. Unsheltered Society (also CRP 382)

Fall. 4 credits.

M. Wilder.

Homelessness is the latest in a continuing list of terms to describe unmet housing needs. To understand how and why such needs persist, even in good economic times, one must examine the nature of interactions between housing policies and housing market forces. This course examines the complex interaction of public and private actions in the development and redevelopment of urban housing. More specifically, the course seeks to investigate the many ways in which private and public policy decisions determine which groups in society will have access to housing. This course is appropriate for students with an interest in urban housing and a background in any of the following areas: urban economics, urban sociology, anthropology, history, or geography. The course will consist of lectures, a wide variety of readings, and guest speakers. Students will be evaluated on the basis of class discussions, two exams, a 15–20 page paper, and an oral presentation.

[604 Urban Economics (also CRP 404)

Fall. 4 credits. Prerequisite: basic economics. Not offered 1988–89.

T 10:10–12:05. Staff.

Urban phenomena are analyzed from an economic point of view. Areas examined include economic aspects of urbanization processes and policies, determinants of urban growth and decline, urban land and housing markets, urban transportation, and urban public services. Some time will be spent in discussing problems of cities in developing countries.]

609 Special Topics in Urban and Regional Theory

Fall or spring. 1–4 credits.

Hours to be announced. Staff.

615 The Politics of Planning

Fall. 4 credits.

P. Clavel.

This graduate-level seminar explores the relationship between the persons who do planning and the community, political, and social movement context for planning. A range of political models is addressed, and literature in politics, sociology, and organizational theory is part of the coverage. Methodology of field research is part of the course, and students will be encouraged to design research that puts them in touch with actual cases, persons, and recent local histories.

619 Special Topics in Planning Theory and Politics

Fall or spring. 1–4 credits.

Hours to be arranged. Staff.

620 Planning Analysis

Spring. 4 credits.

Lec, M W F 10:10–11:00; lab, to be arranged. B. G. Jones.

A survey of commonly used techniques for analyzing various aspects of subnational socioeconomic systems. Emphasizes planning applications.

[621 Planning Research Methods

Fall. 3 credits. S-U grades only. Not offered 1989–90.

W 2:30–4:25. S. Christopherson.

For master's degree students, to write thesis project proposals. Four parts: theory, formulation of research questions and working hypothesis, guide to methods and techniques in social science research, and the role of the expert. The final proposal must also be approved by the thesis adviser.]

622 Information Systems and Microcomputers for Planning and Policy Analysis

Spring. 3 credits. Prerequisite: CRP 522 or equivalent, or permission of instructor.

T R 3:35–5:25. S. Saltzman.

An introduction to the design and use of computer-based information systems for planning and policy analysis. The focus of the course will be on the design and use of database systems for organizing, storing, retrieving, and analyzing information using microcomputers and, secondarily, mainframe computers. Applications of information systems in public and not-for-profit institutions will be reviewed. Students will be expected to complete a term project on a microcomputer using an appropriate programming language.

629 Special Topics in Quantitative Methods and Analysis

Fall or spring. 1–4 credits.

Hours to be arranged. Staff.

630 Local Economic Development Policy—Seminar

Spring. 4 credits.

M. Wilder.

The politics and administration of economic development programs. Theory case studies and policy issues treating the evolution of local development efforts in the transition from the high-growth post-World War II economy to contemporary and classic situations of regional decline.

631 Local Economic Policy—Field Workshop

Spring. 4 credits.

W 3:35–5:30. P. Clavel.

A group policy analysis exercise in an upstate New York city. Students do a combination of data analysis; interviews with labor, business, and public leaders; and problem papers addressed to current issues presented by a client group. Individual work is synthesized into a comprehensive report at the end of the semester.

639 Special Topics in Regional Development Planning

Fall or spring. 1–4 credits.

Hours to be arranged. Staff.

642 Critical Theory and the Foundation of Planning Analysis

Spring. 1-4 credits.

R 11:15-1:10. J. Forester.

Problems of social action are studied in the traditions following Marx, Weber, and Durkheim. Analyses of reproduction and resistance, normative order and power, meaning systems, and organizational action provide the bases for a consideration of Habermas's synthetic critical communications theory of society. Implications for planning practice, education, and research are drawn.

649 Special Topics in Social-Policy Planning

Fall or spring. 1-4 credits.

Hours to be arranged. Staff.

652 The Urban Development Process

Fall. 2 credits. Enrollment limited.

R 12:20-2:15. K. C. Parsons.

Examination of the goals, strategies, methods, and achievements of major participants in the urban land and building market: landowners, speculators, real estate brokers, developers, bankers, lawyers, nonprofit builders, and government agencies. Primarily visiting speakers.

[653 Legal Aspects of Land-Use Planning

Offered alternate spring semesters. 3 credits.

M W F 9:05-9:55. R. S. Booth.

Survey of leading cases and legal concepts in land-use planning, with particular attention to zoning, subdivision control, condemnation, and growth-control issues.]

[654 Real Estate Development I: Analysis and Critique

Fall. 4 credits. Not offered 1989-90. Limited to 20 students with permission of instructor.

Prerequisite: Hotel Administration 300 or equivalent or permission of instructor.

TR 12:20-1:10. S. Stein.

The course will investigate many aspects of real estate development. Areas covered will include acquisition, finance, valuation, construction, design and marketing, and the interplay of those variables.]

[655 Real Estate Development II: Advanced Analysis and Critique

Spring. 4 credits. Limited to 20 students with permission of instructor. Prerequisite: CRP 654 or equivalent. Not offered 1989-90.

Staff.

A continuation of City and Regional Planning 654.]

656 Land Resources Protection Law

Fall. 3 credits.

M W F 9:05-9:55. R. S. Booth.

Examines legal issues raised by government efforts to protect critical land resources such as tidal wetlands, flood plains, forests and agricultural lands, and large resource areas such as the coastal zone. Students will use a broad selection of legal materials and learn to use the basic resources of a law library.

659 Special Topics in Urban Development Planning

Fall or spring. 1-4 credits.

Hours to be arranged. Staff.

[660 Seminar in the History of American City Planning (also Architecture 693)

Fall. 3 credits. Prerequisite: CRP 462 or permission of instructor. Not offered 1989-90.

M 1:25-3:20. Staff.

A research seminar in which each student selects a topic for oral presentation followed by the completion of a research paper. Early sessions examine the scope of planning history, its relations to other disciplines, sources of written and graphic materials, and the uses of historical evidence in interpreting urban planning and development.]

661 Historic Preservation Planning Workshop: Plans and Programs

Fall or spring. 1-4 credits. Prerequisite: CRP 561.

F 2:30-5:30. D. McClive.

Preparation of elements of historic preservation plans, designs, legislation, and special studies. Individual or group projects are selected by students. Fieldwork is emphasized.

662 Seminar in American Urban History (also CRP 361)

Spring. 3 credits. Prerequisite: permission of instructor.

T 10:10-12:05. Staff.

Seminar in the historical evolution of the American city. Emphasis on factors in urban growth, the process of urbanization, urban reform movement, and intellectual and social responses to the city.

663 Historic Preservation Law

Spring. 3 credits. Offered alternate years.

M W F 9:05-9:55. R. S. Booth.

Law of historic district and landmark designation, tools for preservation (such as police power, taxation, eminent domain), and recent developments in state and federal historic preservation mandates.

664 Economics and Financing of Neighborhood Conservation and Preservation

Fall. 3 credits.

W 1:25-3:20. B. G. Jones.

The economic and financial aspects of historic preservation and neighborhood conservation. Topics include public finance, selected issues in urban economics, real estate economics, and private financing of real estate projects.

[665 Preservation Planning and Urban Change

Fall. 3 credits. Not offered 1989-90.

T 11:15-1:10. Staff.

An examination of fundamental planning concepts and issues as they relate to historic preservation. Neighborhood revitalization, federal housing programs, the role of public and private institutions, displacement, and other social issues are among the primary topics.]

669 Special Topics in History and Preservation

Fall or spring. 1-4 credits.

Hours to be arranged. Staff.

670 Regional Planning and Development in Developing Nations

Fall. 4 credits. Prerequisite: second-year graduate standing.

R 2:30-5. W. W. Goldsmith.

Extensive case studies of development planning are analyzed. Focus is on a Marxist critique of the process of regional development through urbanization and in particular on the concepts of equity and efficiency, external economies, export linkages, and internal self-sufficiency and integration. Resource development, national integration, human development, and migration problems are discussed.

671 Seminar in International Planning

Spring. 1 credit. S-U grades only.

F 12:20-1:35. P. Olpadwala.

The international planning lecture series sponsors lectures by visiting scholars or professionals in the field of international development and planning. The only formal requirement for the course is a brief evaluation of the series at the end of the semester.

673 Economics of Regional Development

Spring. 2 or 4 credits.

F 4:30-6:30, alternate S 10-12.

T. Vietorisz.

This course deals with the historical process of regional and metropolitan development, emphasizing Third World problems. While its basic approach is mode-of-production analysis, it also critically surveys location, comparative advantage, and feedback system theories. Development is interpreted as the penetration of the capitalist mode of production into precapitalist societies. Its features are analyzed both in terms of the historical stages of expanding capitalism (mercantile phase, imperialism, multinationals) and in terms of the pre-existing (feudal, Asiatic) precapitalist mode of production. Regional and urban development planning problems are discussed in the light of the contradictions of the above process, as well as in the context of newly emerging Third World socialist countries.

679 Special Topics in Planning and Developing Regions

Fall or spring. 1-4 credits.

[687 Urbanization and the Environment

Fall. 4 credits. Offered alternate years. Not offered 1989-90.

R. S. Booth.

This seminar explores a series of issues related to the impacts of urbanization on the natural environment. Examples of these issues include: waste management, water supply, transportation, energy generation, and maintenance of open spaces. The seminar will include discussion sessions and a series of field trips. Students will prepare short reports, work on a team project, and make class presentations.]

689 Special Topics in Environmental Planning

Fall or spring. Variable credit.

Hours to be arranged. Staff.

699 Special Topics in Regional Science

Fall. Variable credit.

Staff.

711 Planning and Organization Theory
Fall. 4 credits.

R 3:35-5:30. P. Clavel.

Advanced seminar on theoretical models of planning, organization, and urban structure. The first part of the course, which may be taken separately for one credit, provides an overview of administrative issues affecting planning. Next, attention is given to theories of organizational structure, growth, and change. Final sessions are devoted to the influence of urban and regional structures as context. Critical reading, short papers, and seminar discussion characterize the course.

719 Special Topics in Planning Theory and PoliticsFall or spring. Variable credit.
Staff.**720 Quantitative Techniques for Policy Analysis and Program Management**

Fall. 4 credits.

M W F 9:05-11. D. Lewis.

Selected analytical techniques used in the planning and evaluation of public policy and public investments are examined. Topics include simulation modeling, benefit-cost and cost-effectiveness analysis (including capital budgeting), and optimization strategies.

730 Methods of Regional Science and Planning I

Fall. 4 credits. Prerequisite: CRP 520 and CRP 620 or equivalent.

S. Saltzman.

An introduction to some of the major methods and models used in regional science and planning. This is the first semester of a two-semester sequence (see CRP 731). Both courses will cover topics related to the structure and assumptions of the models, model development, and their applications in regional science and planning. Where appropriate, computer implementation will be considered. The fall semester will emphasize statistical and econometric methods.

731 Methods of Regional Science and Planning II

Spring. 3 credits. Prerequisite: CRP 730 or equivalent.

S. Saltzman.

A continuation of CRP 730. The spring semester will provide an introduction to deterministic methods and models such as input/output, social accounting matrices, and optimization models.

[732 Regional Industrial Development

Fall. 4 credits. Prerequisites: basic economics and elementary calculus. Not offered 1988-89.

T 7-9 p.m. Staff.

The course focuses on issues of industrial, as distinct from agricultural, development. Material includes theory of production, elements of growth theory, interindustry relations and formation of industrial complexes, locational attractiveness, and inter-regional flows of goods, services, and factors of production.]

746 Informal Seminar in Planning Theory: Philosophy, Ethics, and Values in Planning

Fall or spring. Variable credit.

J. Forester.

An informal seminar to discuss problems of values, ethics, and alternative philosophical positions that are inherent in various planning proposals or perspectives.

772 Advanced Topics on International Development and Women

Spring. 4 credits. Offered alternate years.

L. Beneria.

A seminar to explore theoretical and empirical issues of interest to M.A. and Ph.D. students working on topics related to gender and international development. The focus will be on a few narrow topics such as the effect of the foreign debt crisis on women, the informal sector and women's work, and gender aspects in demographic change, to be explored in depth in preparation for research and thesis writing. Students will be encouraged to explore and exchange ideas, and to provide mutual support and criticism.

773 Seminar in Project Planning in Developing Countries

Spring. 4 credits.

W 3:35-5:30. D. Lewis.

An examination of the problems and issues involved in preparing project proposals for presentation to funding agencies. Topics include technical design, financial feasibility, social impact analysis, and policy relevance, as well as techniques for effective presentation of proposals. The course is organized as a seminar-workshop providing both an analysis of the critical elements of effective proposals and an opportunity to use those elements in the preparation of proposals. A multidisciplinary perspective is emphasized.

774 Science, Technology, and Development

Fall. 3 credits. Offered alternate years.

T 9:05-11. P. Olpadwala.

The place and role of science and technology as a factor in socioeconomic growth is examined with special reference to developing regions. The social underpinnings and linkages of science and technology are studied and their role explored as a nonneutral and dynamic social force that primarily serves the ends of particular groups in societies. Current issues such as technological development, technology transfer, and appropriateness of technology are discussed in this context, with attention given to both rural and industrial development. Third World science and technology policy-planning options are considered throughout the course.

775 Transnational Corporations and Developing Regions

Fall. 3 credits. Offered alternate years.

T 9:05-11. P. Olpadwala.

Transnational corporations are studied in the context of socioeconomic development. Contending theories of the international firm are examined as a starting point for evaluating contradictory claims and counter claims of proponents and detractors of transnational corporations. Advantages and disadvantages for developing regions are considered and Third World planning and policy options discussed on an ongoing basis.

776 Seminar in Urban Policy and Planning in Developing Countries

Fall or spring. 3 credits.

K. C. Parsons.

The national urban development policy and planning efforts of selected developing countries are examined in the context of urbanization theory and national spatial planning. Recent descriptive and critical literature is explored. Topics include

secondary cities policies, national and urban transportation planning, city planning, sites and services project planning, housing, land policy, and urban development control systems.

777 Theories of Development and Underdevelopment

Spring. 3 credits.

R 1:25-3:20. P. Olpadwala.

Various theories attempting to analyze and explain the phenomena of underdevelopment are examined. Although a range of thought and approaches is considered, the accent is on aspects of political economy revolving around concepts of class and exploitation. Topics include the transition to capitalism; dependent and uneven development; various issues of growth and fluctuation under contemporary capitalism, including crises; rural and industrial development in less-developed countries; and planning for development.

790 Professional Planning Colloquium I

Fall. 1 credit.

F 12:20-2. Staff.

Visiting lecturers treat problems and opportunities in the practice of planning. Topical focus to be announced. The only formal requirements for the course are attendance and a brief evaluation at the semester's end.

792 Master's Thesis, Project, or Research Paper

Fall or spring. 1-10 credits.

Hours to be arranged. Staff.

794 Planning Internships

Fall, spring, or summer. 1-12 credits.

Hours to be arranged. Staff.

Combines a professional planning internship in a metropolitan area with academic study to provide experience and understanding of the planner's role in formulating and implementing plans and policies. Salaried internships in federal or state agencies, legislative offices, and comparable settings include development of research, analysis, and other technical skills. Weekly seminars draw on student field experiences, assigned readings, and guest speakers to examine current issues of federal, urban, and regional policy from the perspective of planning practice.

795 Master's Thesis in Preservation Planning

Fall or spring. 1-6 credits.

Hours to be arranged. Staff.

796 Colloquy Journal Publication Workshop

Fall or spring. 2 credits. S-U grades only.

P. Clavel, J. Forester.

Individual and group projects culminating in the production of a professional journal.

800 Advanced Seminar in Urban and Regional Theory I

Fall. 3 credits. Prerequisite: CRP 500.

M 3:35-5:30. B. G. Jones.

The theory of urban spatial organization. Economic, technological, and social factors leading to urbanization and various kinds of spatial organizations are explored. Major theoretical contributions to the understanding of intraregional and intraurban distribution of population and economic activity are reviewed.

801 Advanced Seminar in Urban and Regional Theory II

Spring. 3 credits. Prerequisite: CRP 800.

M 3:35–5:30. B. G. Jones.

A continuation of City and Regional Planning 800, concentrating on recent developments.

810 Advanced Planning Theory

Fall. 3 credits. Prerequisite: CRP 500 or 710.

F 3:35–5:30. B. G. Jones.

A survey of the works of scholars who have contributed to current thinking about planning theory. Alternative assumptions concerning models of man and theoretical concepts concerning the nature of planning today are considered.

830 Seminar in Regional Sciences, Planning, and Policy Analysis (run jointly with Economics 505: Interdependent Decision Making)

Fall or spring. 4 credits.

S. Saltzman.

This seminar will provide an opportunity to review some of the literature and current research in regional science, planning, and policy analysis. Specific topics covered will vary each year. Empirical and analytical research will be emphasized. Students will be expected to prepare and present a research paper during the semester on some aspect of the topics under review.

890 Planning Research Seminar I

Fall or spring. 2 credits.

W 12:20. Staff.

Intended for doctoral candidates in city and regional planning; other students welcome. Presentation and discussion of current problem areas and research by advanced doctoral students, faculty members, and visitors.

892 Doctoral Dissertation

Fall or spring. 1–2 credits.

Hours to be arranged. Staff.

LANDSCAPE ARCHITECTURE

The Landscape Architecture Program at Cornell is jointly sponsored by the College of Agriculture and Life Sciences (in association with the Department of Floriculture and Ornamental Horticulture) and the College of Architecture, Art, and Planning.

The Program

Program faculty: M. I. Adleman, T. H. Johnson, D. W. Krall, A. S. Lieberman, L. Mirin, R. T. Trancik, P. J. Trowbridge.

The Landscape Architecture Program offers three professional degree alternatives: a two-year graduate curriculum directed to those who have undergraduate degrees in landscape architecture or architecture, a three-year graduate curriculum directed to those who have undergraduate degrees in other fields, and a four-year undergraduate curriculum. Graduate studies in landscape architecture are administered through the Graduate School and lead to a Master of Landscape Architecture degree. Undergraduate studies in landscape architecture are administered through the College of Agriculture and Life Sciences and lead to a Bachelor of Science degree.

Course Information***100 Landscape Architecture Freshman Orientation**

Fall. 1 credit.

M. I. Adleman.

***140 Landscape Design Studio**

Spring. 4 credits.

D. W. Krall.

***201 Theory and Application Studio**

Fall. 6 credits.

M. I. Adleman.

***202 Project Design and Site Planning Studio**

Spring. 6 credits.

T. H. Johnson.

***205 Graphic Communication**

Fall. 3 credits.

T. H. Johnson.

***220 Principles of Spatial Design and Aesthetics**

Fall. 3 credits.

R. T. Trancik.

***301 Natural Systems and Planting Design Studio**

Fall. 6 credits.

D. W. Krall.

302 Urban Landscape Systems Studio

Spring. 6 credits. Prerequisite: LA 301 with a grade of C or better. Lab fee, \$20; cost of drafting supplies, about \$100.

Lecs, M W F 1:25; studios, M W F 2:30–4:25. L. Mirin.

Projects in landscape architecture at the site scale as determined by constraints and opportunities of an urban environment. Emphasis on integration of site and historical analysis in formulation of physical design solutions.

***310 Site Construction**

Spring. 4 credits.

P. J. Trowbridge.

***312 Site Engineering for Landscape Architects**

Spring. 4 credits.

M. I. Adleman.

***401 Advanced Project Design and Graphics Studio**

Fall. 6 credits.

R. T. Trancik.

***402 Senior Project Studio**

Spring. 6 credits.

M. I. Adleman.

***412 Professional Practice**

Spring. 1 credit.

Lec F 11:15. Staff.

490 Special Topics in Landscape Architecture

Fall or spring. 1–3 credits; may be repeated for credit. S-U grades optional. Staff.

Topical subjects in landscape architectural design, theory, history, or technology. Group study of topics not considered in other courses.

497 Independent Study in Landscape Architecture

Fall or spring. 1–5 credits; may be repeated for credit. S-U grades optional. Staff.

Work on special topics by individuals or small groups.

501 Theory and Application Studio

Fall. 6 credits. Lab fee, \$20; cost of basic drafting equipment and supplies, about \$200.

Lecs, M W F 1:25; studios, M W F 2:30–4:25. L. Mirin.

Introduction to basic concepts of site analysis and physical design of landscape. Exercises and projects explore the relationship between natural features, functional demands, professional traditions, and the creation of spatial form.

***502 Project Design and Site Planning Studio**

Spring. 6 credits.

D. W. Krall.

520 Contemporary Issues in Landscape Architecture

Fall. 2 credits. S-U grades only.

Lec, F 11:15–1:10. L. Mirin.

Presentations on topics that are current and significant to the environmental design and planning fields. Issues are discussed from a landscape architecture point of view by practitioners and researchers representing a range of professions.

521 History of European Landscape Architecture

Fall. 3 credits.

Lecs, T R 11:15–1:10; discs to be arranged. L. Mirin.

A survey from classical times to the present, emphasizing design principles and techniques that have established the landscape architecture tradition in Europe. Particular reference is made to the manner in which environments such as gardens, streets, plazas, parks, and new towns reflect in their built form a range of response to demands of culture, economics, technology, security, the law, and ecology.

522 History of American Landscape Architecture

Spring. 3 credits.

Lecs, T R 11:15–1:10; discs to be arranged. L. Mirin.

Landscape architecture in the United States from Jefferson to the present is examined as a unique expression of the American experience. Influences exerted by the physical landscape, the frontier and utopian spirit, and the cultural assumptions of democracy and capitalism are traced as they affect the forms of urban parks, private and corporate estates, public housing, transportation planning, national parks, and other open-space designs.

***531 Regional Landscape Planning I**

Fall. 4 credits.

A. S. Lieberman.

[*532 Regional Landscape Planning II

Spring. 3 credits. Not offered 1989–90. Staff.]

***601 Advanced Project Design Studio**

Fall. 6 credits.

T. H. Johnson.

***602 Urban Systems Studio (also CRP 555)**

Spring. 6 credits.

R. T. Trancik and staff.

***611 Site Engineering for Landscape Architects**

Fall. 4 credits.

M. I. Adleman.

621 Summer Internship Seminar

Fall. 2 credits. S-U grades only.

Hours to be arranged. L. Mirin.
Presentation and discussion of projects developed during summer internships.

***634 Landscape Architectural Research**

Spring. 3 credits.

T. H. Johnson.

650 Fieldwork or Workshop in Landscape Architecture

Fall or spring. 1-5 credits; may be repeated for credit. S-U grades optional.

L. Mirin.

Work on applied problems in landscape architecture in a field or studio setting or both.

***690 Independent Study in Landscape Ecology and Regional Landscape Planning**

Fall. 1-3 credits.

A. S. Lieberman.

***701 Natural Systems and Planting Design Studio**

Fall. 6 credits.

P. J. Trowbridge.

800 Master's Thesis in Landscape Architecture

Fall or spring. 9 credits.

Hours to be arranged. Staff.

Independent research under faculty guidance, leading to the development of a comprehensive and defensible design or study related to the field of landscape architecture. Work is expected to be completed in the final semester of residency.

*Offered through the College of Agriculture and Life Sciences.

FACULTY ROSTER

Beneria, Lourdes, Ph.D., Columbia U. Prof., City and Regional Planning
Bertoia, Roberto, M.F.A., Southern Illinois U. Asst. Prof., Art
Blum, Zevi, B.Arch., Cornell U. Assoc. Prof., Art
Booth, Richard S., J.D., George Washington U. Assoc. Prof., City and Regional Planning
Bowman, Stanley J., M.F.A., U. of New Mexico. Assoc. Prof., Art
Christopherson, Susan M., Ph.D., U. of California at Berkeley. Asst. Prof., City and Regional Planning
Clavel, Pierre, Ph.D., Cornell U. Prof., City and Regional Planning
Cohen, Michael, M.S., Cornell U., Asst. Prof., Architecture
Colby, Victor E., M.F.A., Cornell U. Prof. Emeritus, Art
Cole, James, M.F.A., Cornell U. Asst. Prof., Art
Crump, Ralph W., B.Arch., Cornell U. Prof. Emeritus, Architecture
Czamanski, Stan, Ph.D., U. of Pennsylvania. Prof. Emeritus, City and Regional Planning
Daly, Norman, M.A., Ohio State U. Prof. Emeritus, Art
Dennis, Michael D., B.Arch., U. of Oregon, Prof., Architecture
Evelt, Kenneth W., M.A., Colorado Coll. Prof. Emeritus, Art
Forester, John, Ph.D., U. of California at Berkeley. Assoc. Prof., City and Regional Planning
Goehner, Werner H., Dipl. Ing., Technical U. Karlsruhe (Germany), M.Arch., Cornell U. Assoc. Prof., Architecture

Goldsmith, William W., Ph.D., Cornell U. Prof., City and Regional Planning
Greenberg, Donald P., Ph.D., Cornell U. Prof., Architecture
Hall, Roy A., M.S., Cornell U., Asst. Prof., Architecture
Hascup, George E., B.Arch., U. of California at Berkeley. Assoc. Prof., Architecture
Hitchcock, Miriam C., M.F.A., Yale U., Asst. Prof., Art
Hodgden, Lee F., M.Arch., Massachusetts Inst. of Technology. Assoc. Prof., Architecture
Isard, Walter, Ph.D., Harvard U. Prof., City and Regional Planning
Jarzombek, Mark, Ph.D., Massachusetts Inst. of Technology. Visiting Asst. Prof., Architecture
Jones, Barclay G., Ph.D., U. of North Carolina. Prof., City and Regional Planning
Jullian de la Fuente, Guillaume, M.S. Arch., U. Catalica de Chile. Visiting Prof., Architecture
Kelly, Burnham, M.C.P., Massachusetts Inst. of Technology. Prof. Emeritus, City and Regional Planning
Kira, Alexander, M.R.P., Cornell U. Prof., Architecture
Kord, Victor, M.F.A., Yale U. Prof., Art
Kubelik, Martin, Dr. Ing, Rheinisch-Westfälische Technische Hochschule (Germany). Assoc. Prof., Architecture
Lewis, David B., Ph.D., Cornell U. Assoc. Prof., City and Regional Planning
Locey, Jean N., M.F.A., Ohio U. Assoc. Prof., Art
MacDougall, Bonnie G., Ph.D., Cornell U. Asst. Prof., Architecture
Mackenzie, Archie B., M.Arch., U. of California at Berkeley. Assoc. Prof., Architecture
McClive, Dana M., M.A., Cornell U. Lecturer, City and Regional Planning
Meyer, Elisabeth H., M.F.A., U. of Texas. Asst. Prof., Art
Mikus, Eleanore, M.A., U. of Denver. Assoc. Prof., Art
Miller, John C., M.Arch., Cornell U. Assoc. Prof., Architecture
Mirin, Leonard J., M.L.A., U. of Michigan. Assoc. Prof., Landscape Architecture
Mulcahy, Vincent J., M.Arch., Harvard U. Asst. Prof., Architecture
Ochshorn, Jonathan, M. Urban Design, City College of New York, Asst. Prof., Architecture
Olpadwala, Porus, Ph.D., Cornell U. Assoc. Prof., City and Regional Planning
Ostlund, John P., M.Arch., Harvard U. Asst. Prof., Architecture
Otto, Christian F., Ph.D., Columbia U. Prof., Architecture
Ovaska, Arthur, B.Arch., Cornell U. Asst. Prof., Architecture
Page, Gregory, M.F.A., U. of Wisconsin. Assoc. Prof., Art
Parsons, Kermit C., M.R.P., Cornell U. Prof., City and Regional Planning
Pearman, Charles W., B.Arch., U. of Michigan. Prof., Architecture
Pendleton, Ann M., M. Arch., Princeton U., Asst. Prof., Architecture
Perlus, Barry A., M.F.A., Ohio U., Asst. Prof., Art
Poleskie, Stephen F., B.S., Wilkes Coll. Prof., Art
Reps, John W., M.R.P., Cornell U. Prof. Emeritus, City and Regional Planning
Richardson, Henry W., M.R.P., Cornell U. Assoc. Prof., Architecture
Rowe, Colin F., M.A., U. of London (England). Prof., Architecture

Salmon, David, Ph.D., Cornell U. Asst. Prof., Architecture
Saltzman, Sid, Ph.D., Cornell U. Prof., City and Regional Planning
Saul, Francis W., M.S., Harvard U. Assoc. Prof. Emeritus, Architecture
Schack, Mario L., M.Arch., Harvard U. Prof., Architecture
Shaw, John P., M.Arch., Massachusetts Inst. of Technology. Prof., Architecture
Simitch, Andrea, B.Arch., Cornell U. Asst. Prof., Architecture
Singer, Arnold. Prof. Emeritus, Art
Squier, Jack L., M.F.A., Cornell U. Prof., Art
Stein, Stuart W., M.C.P., Massachusetts Inst. of Technology. Prof., City and Regional Planning
Taft, W. Stanley, M.F.A., California College of Arts and Crafts, Asst. Prof., Art
Tomlan, Michael A., Ph.D., Cornell U. Asst. Prof., City and Regional Planning
Trancik, Roger T., M.L.A.-U.D., Harvard U. Assoc. Prof., Landscape Architecture/City and Regional Planning
Ungers, O. Mathias, Diploma, Technical U. Karlsruhe (Germany). Prof. Emeritus, Architecture
Vitorisz, Thomas, Ph.D., Massachusetts Inst. of Technology. Adjunct Prof., City and Regional Planning
WalkingStick, Kay, M.F.A., Pratt Inst., Asst. Prof., Art
Warke, Val K., M.Arch., Harvard U. Assoc. Prof., Architecture
Wells, Jerry A., B.Arch., U. of Texas. Nathaniel and Margaret Owings Distinguished Alumni Professor of Architecture, Architecture
Wilder, Margaret G., Ph.D., U. of Michigan. Asst. Prof., City and Regional Planning
Woods, Mary N., Ph.D., Columbia U. Asst. Prof., Architecture
Zissovici, John, M.Arch., Cornell U., Asst. Prof., Architecture